

## IPO MARKET MICRO-STRUCTURE: WHO ARE THE GAINERS AND WHO ARE THE LOSERS?

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*While IPO pricing is a market signal for efficiency of the primary market unless the pricing is rational it will not lead to the proper development of the long term capital market. Most of the extant studies concentrate only on such a criterion for assessing market efficiency. Especially, the extant studies concentrate on the listing gains.*

*In this paper we have adopted a different approach coined as 'Historical Approach'. This is policy orient approach to study market efficiency. It is based on the notion that with liberalization markets assume maturity and become more 'efficient' in discriminatory between 'good' and 'bad' issues. The focus is on explaining how the IPO market leads to loses and gains amongst the two main market participants – the IPO Company and the investors.*

*During the period 1992-2010 we have studied three variables through a set of semi-log equations. It has been seen that the number of issues have been declining rapidly at the rate of 18% per annum, while the market capitalization has been growing at the rate of 7.6% per annum. This has lead to larger the issue size growing at the rate of almost 26% per annum. Hence, there have been larger the gain for the IPO companies. However, the investors' gains are ambiguous. An innovative index of Listing Gain has shown this result. This is because rational pricing has not been taking place. If this trend continues, there will be no balance. In the long run investor will be driven away from the IPO market. If this happen, then loss will be of all the market participants and the long run objective of the primary market will not succeed.*

*Therefore, the historical approach employed in our study tells us, as a broad conclusion, that the Indian IPO market has grown since liberalisation and quality of issues has vastly improved. This speaks well for the overall impact of the new policy regime. However, this is only a general analysis and conceals a lot about how efficient pricing is done what kind of role do different market participants play and who gains and who looses in the long run.*

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## 1.0. INTRODUCTION

Adequate capitalization of companies has always been an essential need when they wish to grow their business significantly. So long the business is being continued under their private limited status, the business of companies is confined among few individuals. Gradually over a period of time, the promoters of company desire to expand the name and fame of the company among large section of society and invite capital from the public at large by issuing equity shares. The individuals, who subscribe to the equity shares of the company, if allotted equity shares, becomes shareholder of the company. One of the key aspect which needs utmost attention in this regard is whether the information provided to the individual in respect of the company while inviting capital from the individual has been clearly provided or not. Thus, various intricacies are involved in the IPO market which requires an in-depth study. This paper is an attempt to explore different issues relating IPO market in India and finally suggesting appropriate remedies essential for strengthening of Indian capital market besides promoting equity cult in India.

This paper includes general study of the Indian IPO Market which begins by discussing the approaches to IPO market efficiency. The paper then discusses the market microstructure of the Indian IPO market including the broad outline of the characteristics of the Indian IPO market followed by a discussion of the various features of the Indian IPO market in terms of pricing of issue, participants in IPO market, institutions involved in IPO market, etc. Further, it discusses the trends in the IPO market in terms of the general trends and specific trends using graphical analysis and the growth charts.

Section I gives the overall theme 'approaches to efficiency'. In Section 2 we have given the literature review. Section 3 talks of the Market-Micro Structure of the primary market. In Section 4 the general trends and in Section 5 the historical trends are given. The last Section concludes.

### 1.1. Approaches to IPO Market Efficiency

Market efficiency can be judged by three ways:

- (1) *The Pure theory of finance* is basically Efficient Market Hypothesis. The theory is based on pricing efficiency or informational efficiency<sup>1</sup>.

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<sup>1</sup> Bhanu Murthy, K.V. and Amit K. Singh 2009. 'IPO pricing: Informational inefficiency and misallocation in capital market', at European Financial Management Conference, Milan, June.



- (2) *Traditional approach* looks at the developed and the underdeveloped market in terms of:
- **Width or Breadth of the Market:** This refers to the number of securities, bought and sold. There are situations when many shares exist but transactions take place in only few shares. This means that there isn't enough breadth. There will be breadth if transactions are taking place in the entire range of securities. It is a market which attracts large volume of funds from diversified type of widely scattered investors and scrips.
  - **Depth of the Market:** Depth means that transactions take place at both ends (at high or low prices). But if the transactions take place at only high quoted price or at only low price, then it means that market moves only in one direction. This leads to inefficient financial markets.
  - **Resilience:** How does the market recover? There is market reaction to news. There is good and bad news. Is the market symmetric to good and bad news? For example if there is an announcement of capital gain tax, which is a bad news then how will the market respond or if there is an announcement of tax concessions that is good news then how will the market respond. It also means how quickly and how well it copes with adversity.
- (3) *Historical Approach:* The third approach we are proposing is the new approach, where we can observe the historical trends relating to number of IPOs, total value of IPOs and average size of IPOs. This approach can be called as historical approach to study the efficiency of IPO market. If market capitalisation increases it is a good sign and reflects the growth of the market. But if number of issues decrease over a period of time it shows that market retains good issue and is discarding bad issue. In this approach, the objective is to measure the trend of IPO market. The approach combines policy with technical analysis. After abolition of CCI, in 1993, the Book Building process started. Although markets were freed the market experience was not well established. Both IPO companies and buyers were inexperienced. The market, was hence, not so efficient. An efficient market has the power to judge and can distinguish between the good and bad issues. If this be the case we expect certain trends in the days to follow after liberalization.

In this paper we adopt the historical approach. We expect that as the market becomes efficient, bad issues are discarded and good issue retains. Over a period of time the

quality of issue will improve if the policy change is well taken by the market.

In the light of this historical approach to IPO market efficiency, we could use the following criteria for historical efficiency:

- Relative decline in number of issues.
- Increase in market capitalisation.
- Increase in average size of an issue.

Therefore, we test this criterion, in the context of historical trend in IPO market in India, then we can conclude over a period of time if the market displays 'historical efficiency'. This however does not rule out the possibility of informational efficiency as indicated by efficient market hypothesis. In the historical approach we are only adopting a broad - brush approach.

## 2.0 LITERATURE SURVEY

Nagaraj (1996) studied India's capital market boom, its proximate causes and its implications for the economy and the corporate sector. He analyzed the trends in aggregate savings, its composition and the changing pattern of corporate finance. He perceived Indian capital market as a large disintermediation, household sector substituted shares and debentures for bank deposits and corporate sector securitized its debt. He found no association between growth rates of the capital market mobilization and aggregate saving rate, corporate physical investment and value added. He witnessed financial disintermediation with little effect on aggregate saving rate, corporate investment and output growth rates.

R.N. Agarwal (2000) attempted to evaluate the relationship between the financial sector and capital market development and the growth of real G.D.P by analysing the Indian data beginning with the 1980's. The study supports the Levine and Zervos' (1996) argument that well developed stock may be able to offer a different kind of financial services than the banking system and therefore provide an extra impetus to economic activity. Correlation analysis reveals that the banking sector and capital market development indicators are complementary and not a substitute for each other. The study finds out that the right variable to be a proxy for the expansion of economic activity is the totality of funds mobilised by the corporate sector from alternative sources and not merely the credit by the commercial banks as has been assumed in earlier studies.



Doshi and Agarwal (2002) studied the Indian IPO market and the various risk factors involved therein. The investment in IPO does not mean that it will yield good returns every time. There are various risk factors involved therein. In this context they have analysed the IPO returns for the first day, first- month, three-month, six-month, one-year and more than one year. The results show that there are many factors affecting returns on IPO like the fundamentals of the company, management of the company, pricing of the issue, FII investments, various economic and market related factors. The investment in IPOs needs careful thought and proper understanding of the company and industry fundamentals. The investors should look into above mentioned factors and play safe in IPO market.

Mehla & Prasad (2006) analysed the reforms in Indian primary market. They studied the various regulations framed by SEBI for the revival of primary market during the period 1992-2004 and also the impact of various reforms on the growth of public and rights issues. They critically analysed the pricing methods under CCI era and SEBI era. The strict entry norms for companies presented a depressive mood in the number as well as amount mobilized from the public and rights issue in later years. The massive fall in the amount rose to 33138 crores in the year 1997-98 and number of issues plummeting to 48 in the year 1998-99 became a cause of concentration. This deceleration continued in later years also. Although level of market transparency, discipline and efficiency of capital market has improved over the years but SEBI has to work out a proper balance between the protection of investors and the interests of promoters. There is a need for institutional restructuring of new issue market. The right implementation of the guidelines is the only way to lure investors back to the market.

Banerjee & Kumar (2007) analysed the initial public offerings in the year 2007 and they also focussed on the factors that allowed various sectors to raise money through the primary market via IPOs. For the purpose they have analysed the projections from various resources indicating the growth of Indian economy. They analysed the number of IPOs that came in year 2007 in all the industrial segments, the projected growth rate in GDP, Inflation, Agriculture, Industry, Services, the month-wise Sectoral Index of Industrial production, performance of BSE- indices and BSE sectoral indices. The results show that most of the IPOs pertain to infrastructure related companies and IT service providers. The rise in IPOs can be attributed to resurgence in the Indian economy, the bullish trend in the secondary market and the corporate performance during the year 2007.

Banerjee & Vijay (2007) analysed the three perspectives of IPO in India. First how close

the Indian regulatory model SEBI is with US regulatory model SEC and the difference between the SEBI and SEC guidelines. Secondly the role of underwriters in the IPO process in India and third, the emergence of private equity in India as an alternative financing market. He concluded that though SEBI has been modelled closely on lines of SEC of US, but the regulatory system in USA is drastically different when compared to regulatory system in India. The underwriters have to play crucial role in IPO process- IPO pricing, the timing of the issue, marketing of an issue etc. With an increase in private equity and equity capital investment and venture capital investment in India, the number of companies going for IPOs will substantially increase in future and the private equity will play a major role in financing IPOs.

Chaudhuri (2007) brings out the relationship between the macroeconomic factors and stock market movements for the Indian Economy. The households allocate their savings between debt and equity instruments and the difference between E/P (Earnings/ Price ratio) and give the relative attractiveness of the two markets. In a given time period, given a level of GDP, a finite amount of savings is generated and in that time period, more savings can flow into the stock market only if individuals liquidate their debt holdings. Thus, in a given time period as savings are finite and cannot increase dramatically overnight, the increase in market index for a prolonged period cannot be sustained. Thus the ever increasing Sensex on its own is not a possibility; its growth has to be anchored in the GDP growth rate. However if foreign savings get channelled in the Indian economy and the Indian stock market, the increase in Sensex can continue and the savings flowing into the domestic stock market need not be restricted by the extent of domestic savings. However foreign savings will get channelled into India only if rate of return from this market is relatively greater than the markets of other economies.

He uses technical analysis tools like Andrews' pitchfork, Bollinger band, Fibonacci fan, moving average, moving average convergence divergence, relative strength index etc. to examine the current state of the Indian stock market and observe whether on stand alone basis, one can analyse the movements in market index. The results show that stock prices have to reflect the fundamentals of the economy and there is a relationship between market capitalization and Gross Domestic Product of a country. Only by taking all the above factors into consideration simultaneously, one can sense the stock market movements.

Kannan (2007) analysed the growth of IPO market since 90's. Indian IPO market is the eighth largest in the world as on 2007. Top global private equity funds as well as local



funds have been the key drivers of Indian IPO market. The Indian IPO market got its momentum in early 90s but the mayhem and turmoil in the secondary market during the mid 90s kept investors away from the primary market. Subsequently for a second time, the IT boom in the country boosted primary market and gave it a good chance for revival, but again it did not sustain due to the burst of the technology bubble. The year 2004 brought a rally into the IPO market but ONGC fiasco had a widespread impact on the market. In this context, he has raised a question whether investors can rely on the IPO process and what assurance the regulators can give to the investors.

Reddy G (2007) analysed the growth pattern of primary capital issues in India. For the purpose he found the aggregate pattern of capital issues in India and their share of contribution ownership-wise, industry-wise, type-wise, size-wise and region-wise. The results show that:

- The aggregate annual growth rate of number and the amount of capital issues recorded a positive trend except during the periods of Harshad Mehta (1992) and Ketan Parekh (2001) scams but the IPO scam in 2005 has not caused any adverse impact on primary capital issues.
- The average growth rate of amount of capital issues of public sector stood at 55.3% and that of private sector stood at 43.6%.
- In the first half of the post-liberalisation period, the public and right issue contributed a major share in total number and amount of capital issues whereas in the second half, only private placements were dominating the capital issues.
- The growth of capital issues show a varying proportion of contribution from the four regions but the western region contributes more than 50% of the total capital issues.

Saha (2007) reviewed the different aspects of book-building process of public issues and the merchant banking activities relating to such process in the Indian primary capital market. In book-building method, price of securities is determined by the issuer company along with Book running lead managers (BRLM) on the basis of feedback received from the investors through market intermediaries in accordance with SEBI guidelines. He analysed the book-building issues in India during the period 2003-06 through Bombay stock exchange and also the activities of all the intermediaries viz. merchant bankers to the issue, registrar to an issue, Syndicate members etc. in this public

issue process. He concluded that the merchant bankers play an important role on capital issue management of securities in book-building process. Therefore the merchant bankers should be more dynamic, strategic and vigorous to meet the challenges with a view to improve the corporate finance and establish a healthy corporate environment. If this job is done by merchant bankers with the help of issuing company and SEBI together, investors' interests can be safeguarded in a better way.

Subbarao (2007) studied about revival of investor confidence in the primary market. He tried to find out the factors affecting equity primary market capital issues and the revival measures required to strengthen the primary markets. The number of small investors involved in new issue or primary market is massive. These investors are vulnerable to easy exploitation. It is estimated that the number of investors subscribing to new issues every year is twice the number of those who buy in secondary market in the past. Information asymmetry, excessive premium, lack of quality in equity issues, price rigging after listing, lack of long term attitude by investors and vanishing companies are the factors that affected investors' confidence in primary markets. He collected the information from 500 respondents from 10 cities based on investor density as a percentage of total population. He concluded that it is the duty of market regulator to bring in stringent regulations and protect the retail investors from fraudulent and unhealthy practices in the market. Retail investors are the major class of investors in public offering. They should have enough confidence in the system to invest in it.

Vijaylakshmi & Angayarkanni (2007) analysed the IPOs as a major source of raising finance. They studied the various regulatory requirements governing IPOs viz. Companies Act, SEBI DIP guidelines, RBI guidelines, Stock exchange regulations. They also attempted to study the recent trends in the primary market. The results show that Indian primary market has been experiencing a positive trend in recent times. A company going public is not only a source of raising funds rather it helps to create global presence, global brands and global markets. The successful IPOs reflect an investment economy and also the investor's confidence in the market.

Gangadhar and Reddy (2008) explains that book building system, a part of initial public offer (IPO) of Indian Capital Market is most practical, fast and efficient management of mega issues. Main Findings of the study are:

- (a) Since inception of Book building process in India, shares of mega issues in total capital mobilised has increased from 60.1% in 1994-95 to 92.3% in 2003-04.



- (b) The authors define mega issue as an Initial Public Offer with a capital offered to public exceed more than Rs 100 crore.
- (c) Book Building process has got its inherent deficiencies such as:
- It is only applicable for mega issues.
  - The risk return preference of the investor cannot be estimated systematically.
  - It works only in efficient and matured markets.
  - There is a possibility of price rigging its promoters before public issue.
  - This Mechanism has not reached the expected heights of the investors in Indian Capital Market.
  - The success of book-building system is depending on the cooperation among book runner lead manager (BRLM), issuing company, securities and exchange board of India and Investors.

Kumar (2008) evaluated the IPO pricing system in India. He tested the efficacy of book-building as an efficient pricing method by taking the data of IPOs in 2004 and 2005. The return for the period from the closing date of bidding and the listing date was much higher than the index return for the same period in 2004; consequently most of the issues were underpriced. The objective behind SEBI introducing the book-building process as a method to discover the right price of the offer, but historical evidence suggests that IPOs are either undervalued or overvalued. He concluded that although no price discovery mechanism is ideal, a mutual cooperation between the regulatory authority, companies and book-building could minimise the price discrimination between the offer price and the listing price.

Pande (2008) analysed whether the retail investors are benefited from investing in hot IPOs. Indian primary markets have seen very high degree of oversubscriptions in the IPOs during 2007. The highest oversubscription was made in Religare Enterprises Limited- a financial services firm. He studied the basis of allocation of the shares in the IPO of Religare enterprises as published by its registrar to understand the level of rationing of shares to retail investors in India. The number of retail investors participating in IPOs is an important parameter for both issuers as well as policy makers. The results show that the largest group of retail investors has invested more than Rs 97000 per application to get allotment. Retail investors who have invested Rs. 6475 (minimum) are only about 7.75%. This shows that the smallest of retail investors have

practically no chance (1:89) of getting allocations in such IPOs. In order to have a fair chance of getting allocation in such IPO, the investor should have invested about Rs 6 lakh to 7 lakh. All this clearly shows that such IPOs do not benefit small retail investors. Ideally the number of investors who ask for smallest number of shares should be much larger than any other category but this will be possible only by improving their chances of success with respect to any other category among the retail investors.

Harleen & Gupta (2010) evaluated the performance of IPOs in capital market, the effectiveness of IPOs in the area of pricing and disclosure. He also identified the problems in administration of IPOs in Indian capital market. The performance of IPOs is judged by taking returns for 1 month, 3 months, 6 months, 1 year, and 3 years. They also analysed the capital formation through IPO route. The results show that the trends of IPOs have been overwhelming and SEBI has also streamlined several processes. They concluded by saying that several far reaching reforms by SEBI could be well established by looking at the swelling trends of IPOs in the market.

### **3.0 MARKET MICRO STRUCTURE OF INDIAN IPO MARKET**

Initial public offering (IPO) is one of the most important event in the life of the company while transiting from the status of a private company to a public one. IPO means offer of shares to the public by a company which approached the primary market for the first time for raising funds, either after incorporation or on conversion from private to public. Since IPOs happen only once for each company, so often presented as once in a lifetime opportunities.

The market microstructure of the Indian IPO market has been discussed in terms of the various features. While there could be other aspects of market micro-structure we choose to concentrate on the following:

1. Pricing methods
  2. Institutions
  3. Participants
  4. Trends
1. Pricing Methods: Pricing of a new capital asset or instrument is the most critical element in the capital market. The role of price in the capital market is as follows:
    - It acts as a signal for attracting capital funds.



- It equilibrates demand and supply.
- It is a summary valuation of the underlying fundamentals of the share.
- It is a summary of the information content of trading in a market.

The Initial Public Offer (IPO) can be priced on the basis of three methods:

1. Auctions where the market price of the securities is determined after the bids are submitted.
2. Fixed Price where the price is set prior to the allocation.

Book Building where an indicative range is given before hand and the offer price and quantum to be issued is decided on the basis of bids received.

#### *Pricing Information*

- Ex-post: This is the information contained in the draft prospectus regarding the past performance. The variables are- Return on Networth, Debt Equity and Price band. They guide the prospective investor about the IPO Company.
  - Ex-ante: This is the expected price when the IPO is listed. The volume, turnover, high price, low price on the opening day, all are expected values when the investor is taking a decision to invest in an IPO.
2. Institutions: Before the system of book building was allowed, the IPO's were under the control of Controller of Capital Issue (CCI). The CCI control was a quantitative control. CCI determined the issue size and the price. The problem with a quantitative control is that it does not reflect the changing market conditions of demand and supply. An over subscribed issue did not lead to greater value generation by the IPO company. The mobilization of capital through the capital market was restricted.
  3. Participants: The participants in the IPO market are:
    - IPO Company
    - IPO investor
    - Merchant banker
    - Book runner

The role of these market participants and agents is explained below:

- (a) **IPO Company:** The initial selling of stock by a company to the public is done to raise capital. The objectives of IPO company when they are launching their IPO are:
- **Price:** The IPO is able to draw the maximum capital turnover from the market.
  - **Elasticity of demand:** The IPO Company should know what the elasticity of demand for their IPO is only then it can rightly price the issue and gain from such pricing by maximising the mobilization of capital.
  - **Competitive bid:** If two or three IPOs are simultaneously launched in the market, then IPO should do pricing in such a way that it shows true picture of the company to the investor.
  - **Fundamentals of the project:** Pricing should be done in such a way that it is related to fundamentals of the company. The funds collected should be in accordance with fundamentals of the project of the company. The investor needs an assurance that the IPO Company shall properly utilise the funds.
- (b) **IPO investor:** According to the book building process, three classes of investors can bid for the shares:
- **Retail Individual Investor (RII):** In the retail individual investor category, investors cannot apply more than Rs two lakh (Rs 2, 00,000) in an IPO. Retail Individual investors have an allocation of 35% of shares of the total issue size in book build IPOs. NRI's who apply with less than Rs 2, 00,000/ are also considered as RII category. Retail Individual investor can bid for more than Rs 200,000 in an IPO by applying in non institutional investors' category. There is no upper limit for bidding amount in 'non institutional investors category'.
  - **High Networth Individual (HNI):** Individual investors, NRI's, Companies, trust, etc. who bid for more than Rs 2 lakh are known as High Networth Individual. High Networth Individuals have an allocation of 15% of shares of the total issue size in Book build IPOs.
  - **Qualified Institutional Buyers (QIBs):** Financial institutions, banks, FII's



and mutual funds who are registered with SEBI are called QIB's. They usually apply in very high quantities. QIBs are mostly representatives of small investors who invest through mutual funds, ULIP schemes of insurance companies and pension schemes. QIB have an allocation of 50% of shares of the total issue size in book build IPOs. Earlier, QIBs were required to pay only 10 per cent of the total value of the shares at the time of application. But from May 1, 2010 the SEBI had asked QIBs to pay 100 per cent of the value of shares in all new issues at the time of application for IPOs. The new rule for QIBs was aimed at bringing them on a par with retail investors, who always paid 100 per cent of the money while applying for shares.

#### Objectives of the IPO investors

- Rational pricing: If the initial price is high, initial capital is also high. Thus, the long term return is low.

The reason being

$$K_e = (D_1/P_0) + g.$$

If  $P_0$  is high,  $K_e$  will be lower and it is in favour of issuer.

If  $P_0$  is low,  $K_e$  will be high and it is in favour of investor.

- Short term gain or listing gain: It is one of the objectives of the investor. Each investor has a tendency to get short term gain in the IPO pricing.
- Relative return: When an IPO is launched then investor should maximise the return. When they are faced with alternative investment opportunities in IPO market that are launched simultaneously, the investor would like to choose that which is likely to give highest return. This is subject to the risk exposure in different IPOs. The investor would like to own an efficient portfolio.
- Problem of valuation: Since the fundamentals of the company are not really known and the expected returns are known, there is a risk and uncertainty. And since this holds goods for all investment, the investor cannot decide rationally to choose the right IPO.

- (c) Merchant Banker and Book Runner: A Merchant Banker possessing a valid SEBI registration in accordance with the SEBI (Merchant Bankers) Regulations, 1992

is eligible to act as a Book Running Lead Manager to an issue. When an issuer decides to offer its securities to investors using the book-building route, he appoints a merchant banker as the lead manager and book runner. This book runner is a Category-I merchant banker. The book runner prepares a preliminary prospectus and files it with SEBI. This preliminary prospectus is complete in all aspects except for offer price; it gives an indicative price-band rather than a fixed price.

### *Objectives of the Merchant Banker and Book Runner*

The merchant banker gain depends on the issue size of the IPO Company. Larger the issue size, larger will be their commission on the issue. Generally their main objective is based on the pricing of the issue. If the price of the issue is high then their gain on the listing day is also high.

4. Trends in IPO Market: We have undertaken some exercises in the study meant for studying the trends in Indian IPO Market. The exercises undertaken to study the trends in Indian IPO Market can broadly be put into two categories. These are:
- General trends
  - Historical trends

## **4.0 GENERAL TRENDS**

The general trends of IPO market are given in the form of phases in IPO market from the pre-liberalisation era to post-liberalisation era. The development of Indian initial public offering market can be divided into five phases.

*Phase 1: 1989-1991 (CCI Era)* - Prior to 1991, the Indian IPO market was highly regulated and was in fact controlled by the Controller of Capital Issues (CCI). Around 525 companies have approached the market from 1989 to 1991 and raised around Rs 1860 crores through IPO route. But after abolition of CCI and with the establishment of SEBI, the IPO market in India has changed a lot.

*Phase 2: (1991-1996)* - The second phase of Indian IPO market has been started by the dismantling of the Controller of Capital Issues (CCI) and introduction of the free pricing mechanism (which permits the companies to price the issues). This changed the whole facet of Initial Public Offering (IPO) market. Free pricing mechanism allowed good



companies to raise money from the primary market at the right price, which was denied earlier. The government realised the need for a regulated environment and started to promote its necessity in capital markets. The result was the establishment of The Securities and Exchange Board of India (SEBI) which became active in 1992. SEBI was assigned the role of monitoring and regulating the working of stockbrokers, bankers to an issue, merchant bankers, portfolio managers, and other intermediaries who are associated with stock markets. . In 1991- 1992, 196 public issues were launched. In 1994-95, the number of IPOs increased to 1336 amounting to Rs.12928 crores. Next year, in 1995-96 the number of IPOs reached to the maximum level of 1407. The amount of IPOs was Rs. 11663 crores which was a drastic increase in the number and amount raised compared to the CCI era.

*Phase 3: (1997-2001)* - During the five year period of 1997 to 2001 , there was a marked decline in number of IPOs and amount raised through them in 1996-97, largely as a result of the stricter eligibility criteria for public issues imposed by SEBI. Out of IPOs made during 1996-97, there were 697 IPOs by unlisted companies raising Rs. 5959 crores. The number of IPOs further declined in 1997-98 to 62 public issues. The decline can be attributed to the decline in industrial activity in the country and due to strict entry norms for accessing the market. During 1998-99, only 32 IPOs for Rs 7911 crores were floated. The growth of IPOs reduced partly due to lack of investor confidence in primary markets and partly because of depressed secondary markets.

During 1999-2000, there was a marked increase in number of IPOs to 65 from 32 in 1998-99 because of the boom in the IT sector. Many companies have raised the money during this period and many issues were mispriced. The increase continued in the next year also where number of IPOs almost doubled as compared to previous year. This increase may be attributed to restored confidence and willingness of investors to invest in new companies coming to market.

*Phase 4: (2002-2005)* - After the boom in the IT sector, the Indian IPO market has again gone through prolonged sluggish phase for having five years. During this period the Ketan Parekh scam weakened the investor sentiment towards the IPO market. Around 30 companies have raised the money from 2002 to 2003 which were largely from public sector banks and the average issue size was relatively big for these banks. But after 2003, there has been an upturn in the IPO market with some of the biggest companies like the public issue of Maruti Udyog Ltd. which has received overwhelming response from the market with the issue being oversubscribed by more

than 5 times. This issue has changed the investor sentiment towards IPO market. Buoyant secondary market conditions and strong economic fundamentals have also contributed to this growth story.

*Phase 5: (2006-2010)* - The Golden Era of Indian IPO market has started in the year 2006. According to the Ernst & Young report, Indian companies raised US\$7.23 billion from domestic capital markets in 2006, making the country the world's eighth largest issuer of equity capital. Of the total funds raised in India, energy companies garnered half of it. Reliance Petroleum's US\$1.8 billion issue ranked number 7 in the top 20 IPOs in the world. Cairn Energy raised US\$1.3 billion. But this does not mean that only energy firms have dominated the IPO market. The other sectors have also flourished. In 2007, Indian IPOs continued to surge, with mega issues such as DLF and ICICI. January 2008 was a good month for Indian stock market. Both Sensex and Nifty recorded their all time heights in that month when Sensex touched 21000. But in the same month market started collapsing due to the financial meltdown in the US which was started in December 2007, and continued for one and half years. Then it was said that the plunge in the market was due to profit booking. But the downward trend continued and Sensex came down to 7000 range in October 2008. Indian traders were in panic, they sold their stocks and taken exit from the market. Real estate sector, where prices were at their peak, witnessed liquidity crunch. Tourism and aviation sectors also witnessed slowdown. Techies and financial services executives lost their job. Government came forward with three stimulus packages injected the same into the economy. After mid of 2009, the Indian IPO market has again became active and people became more interested in buying fresh shares. Due to favorable market conditions, IPOs of Adani power, NHPC and Oil India were hit. Adani power, the company owned by Gautam Adani was one major IPO after the financial crisis. The issue was over subscribed by 21 times. On August 24, 2009 Bombay stock exchange started IPO index which was first of its kind in India. The index tracks the value of stocks for two years after listing with base date May 3, 2004. In the Year 2010, the Indian IPO market has created history, when the Coal India Limited, the world's largest coal company, is one of India's largest public sector enterprises has come out with the Rs 15000 crore IPO, which is the biggest IPO in the history of Indian IPO market. Small Public issues with new theme of products were launched like Jubilant Foodwork IPO which serves Domino Pizza to the people and Talwarkar Value fitness IPO who has chain of body building. These IPOs have received an overwhelming response from the market and the investor and have given a huge listing as well as short term gain to the investor.



## 5.0 HISTORICAL TRENDS

Having studied the market micro-structure, we now study the historical approach to the IPO market trends. The specific trends in IPO market are studied by taking the data of IPOs from the year 1991-92 to 2009-10. The variables studied include the number of IPOs, the amount raised through IPOs, the average size of IPOs and the index listing gain. On the basis of this specific trend analysis we have constructed growth charts for actual and predicted figures. The average size of IPOs is calculated by dividing amount of issue with number of issue.

The growth of IPOs in terms of number of IPOs, amount of IPOs and average size of IPOs is calculated by applying the following semi-log equation:

$$\text{Log } Y = a + bt + ut$$

where,

Y= Number of IPOs/ Amount of IPOs/Average size of IPOs.

a= Intercept term

b= growth rate

t= time (years)

u= error term

The following table gives the dataset related to number of IPOs and the amount raised through IPOs from the year 1992 till 2010. The average size of the IPO is calculated by dividing the amount raised through IPOs by number of IPOs. At a glance the table shows that the amount raised through IPOs have increased whereas the number of IPOs has reduced over a period of time. From this dataset, the analysis of IPOs is done.

Table 1.1: Pattern of IPOs in India

Year	Market Capitalization	No. of issues	Average size
1992	1898	196	9.683673
1993	6252	528	11.84091
1994	13443	770	17.45844
1995	12928	1336	9.676647
1996	11663	1407	8.289268
1997	11387	697	16.33716
1998	3061	62	49.37097
1999	7911	32	247.2188
2000	7673	65	118.0462
2001	6618	119	55.61345
2002	6423	19	338.0526
2003	5732	14	409.4286
2004	22130	34	650.8824
2005	25526	34	750.7647
2006	23676	102	232.1176
2007	24993	85	294.0353
2008	53219	91	584.8242
2009	3534	22	160.6364
2010	24004	30	800.1333

Source: Prime database

### 5.1. Analysis of Growth in Market Capitalization through IPOs

Table 1.2: Growth of Market Capitalization of IPOs – 1992-2010

Summary Output		(log Amount)			
Regression Statistics					
Multiple R	0.506334				
R Square	0.256374				
Adjusted R Square	0.212631				
Standard Error	0.756782				
Observations	19				
ANOVA					
	df.	SS	MS	F	Significance F
Regression	1	3.356682617	3.3566826	5.86096	0.026958



Residual	17	9.736221209	0.5727189		
Total	18	13.09290383			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	-144.312	63.42814982	-2.275204	0.036129	
Year	0.076739	0.031698107	2.420942	0.026958	
	Growth Rate of Amount raised through IPOs			Significant at 5% level	

$$\text{Log } Y = a + bt + u \tag{1}$$

$$\text{Log (Amount of IPOs)} = -144.312 + 0.076739 t \tag{2}$$

Where,

Y=Amount of IPOs

a= Intercept term

b= growth rate

t= time (years)

u= error term

The above table reflects the growth of initial public offerings in terms of amount raised. The regression analysis shows that the amount raised through IPOs have grown at the rate of 7.5% p.a. compounded annually. This calculated growth rate is highly significant as the p-value is 0.027.

Figure 1.1: Market Capitalization of IPOs



## 5.2. Analysis of Growth in Number of IPOs

Table 3.3: Growth of IPO Issues – 1992-2010

Summary Output		(log Amount)			
Regression Statistics					
Multiple R	0.692798				
R Square	0.479969				
Adjusted R Square	0.449379				
Standard Error	1.096358				
Observations	19				
ANOVA					
	df.	SS	MS	F	Significance F
Regression	1	18.85981	18.859809	15.69034	0.001009
Residual	17	20.43403	1.2020015		
Total	18	39.29383			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	368.6354	91.88906	4.0117445	0.000904	
Year	-0.1819	0.045921	-3.961103	0.001009	
-18.19%	Rate of growth of IPO issues			Significant at 5% level	

$$\text{Log } Y = a + bt + ut \quad (1)$$

$$\text{Log (Number of IPOs)} = 368.6354 + (-) 0.1819 t \quad (2)$$

Where,

Y= Number of IPOs

a= Intercept term

b= growth rate

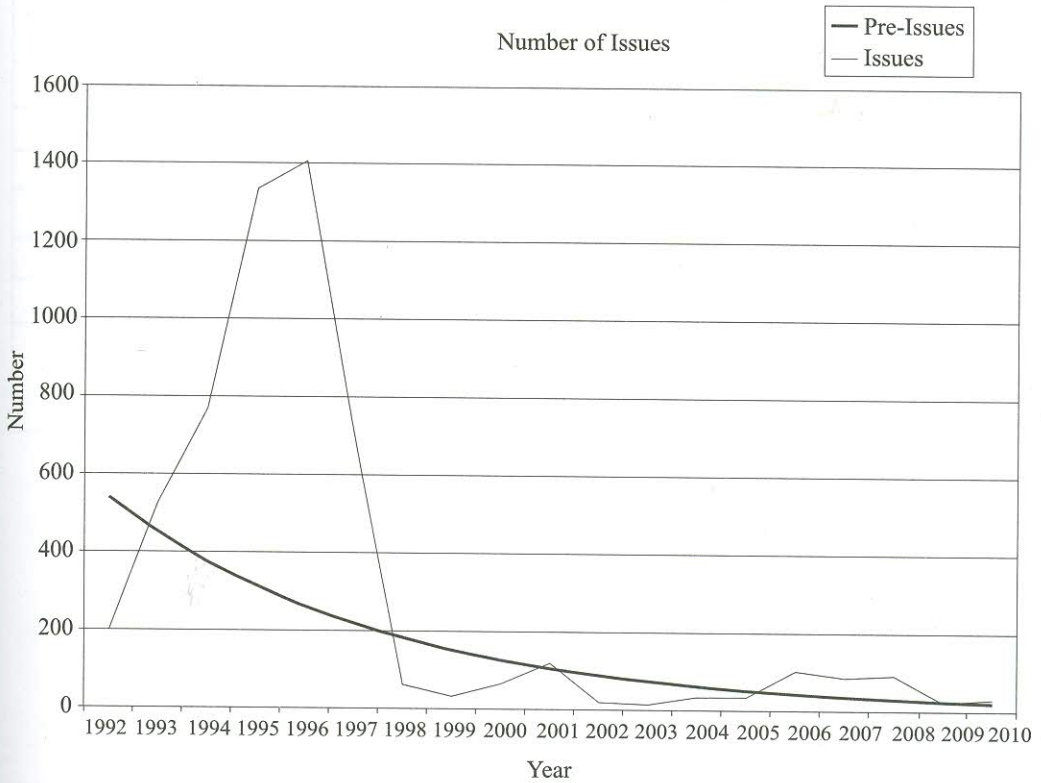
t= time (years)

u= error term

The above table shows that the growth in terms of number of IPOs. The IPOs have declined at the rate of 18% p.a. compounded annually. And the P-value shows that the results are highly significant, at .1 percent level. The peak in Figure 3.2 only shows the boom due to various fads and scams. This was a reflection of the initial euphoria and inexperience with a free market soon after liberalization. The bubble burst and things settled down after 2000.



Figure 1.2: Growth in number of IPOs



5.3 Analysis of Growth in Average Size of IPOs

As a result of the decline in the number of issues and the growth in the volume of turnover raised from the primary capital market we find that the average size of the IPO issue has increased disproportionately. It is in this sense we are talking of the improved IPO market trends.

Table 3.4: Growth of Average Size of IPO Issues – 1992-2010

SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.871042				
R Square	0.758715				
Adjusted R Square	0.744521				
Standard Error	0.844564				
Observations	19				

ANOVA	df.	SS	MS	F	Significance F
Regression	1	38.12955	38.129554	53.45597	1.22E-06
Residual	17	12.12591	0.713289		
Total	18	50.25547			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	-512.947	70.78546	-7.246508	1.37E-06	
Year	0.258639	0.035375	7.3113591	1.22E-06	
	Growth Rate of Average Size of Issue			Significant at 5% level	

$$\text{Log } Y = a + bt + ut \quad (1)$$

$$\text{Log } (Y) = -512.947 + 0.2586 t \quad (2)$$

Where,

Y= Average Size of IPOs

a= Intercept term

b= growth rate

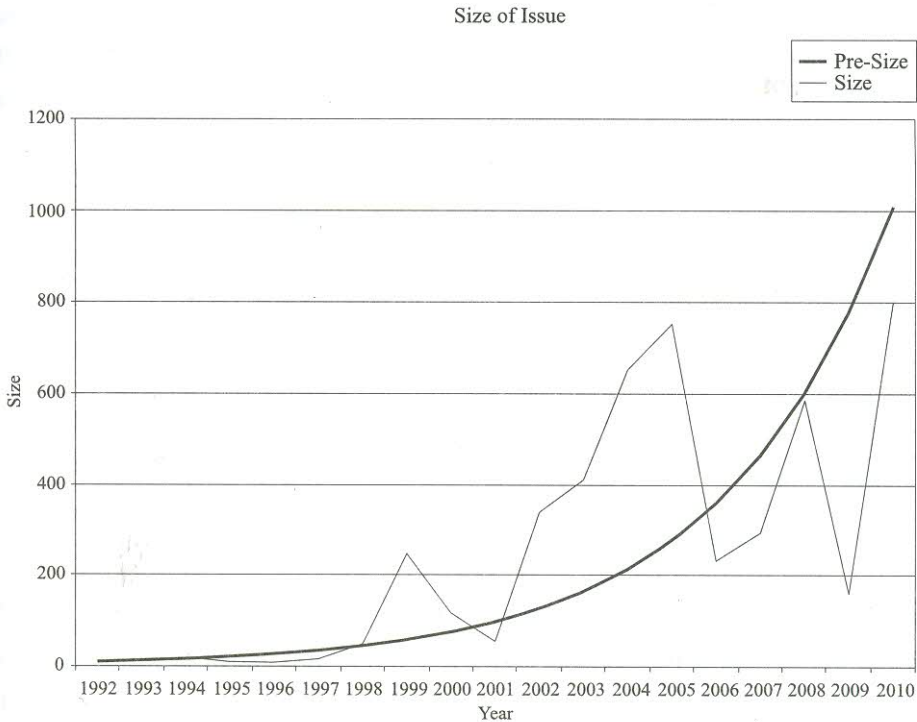
t= time (years)

u= error term

The above table shows the average size of IPOs has grown at the rate of 26% p.a. compounded annually and the results are highly significant as reflected by p-values.



Figure 1.3: Growth in Average Size of IPO Issue



It is obvious that after the initial reckless behaviour, the market, the IPO companies and investors have developed discernment about the quality of IPOs. The market is no longer reflecting a number game but is evolving as a relatively mature market that can distinguish between good and bad issues.

#### 5.4 Analysis of Average Listing Gain in IPOs

In the previous section we have considered the trends in three variables, that is, number of issues, amount of issues and average size of issues. This analysis only tells us that the IPO companies have gained. Now we wish to know, out of the participant –buyers and sellers” who are the gainers and who are the losers? Therefore for this we further verify listing gain. People usually invest their money in IPO market in order to have listing gains. Therefore any study of IPO market structure is incomplete if we do not talk about the trends in listing gain. Therefore we have studied the trends in listing gain from the year 2000 to 2007. The listing gains are not considered from 1992 to 2010 because of unavailability of all the figures. The average listing gain varies in the years under study. Therefore in order to capture the trend in listing gain which are never the less volatile, the

index of listing gain is proposed as under:

$$IDxlg = 100 (+/-) \% \text{ Loss/Gain}$$

Table 1.5: Index of Average Listing Gains

Year	No. of IPOs	% Average Listing Gain	Index of Listing Gain
2000	9	14	114
2001	2	-44	56
2002	1	-5	95
2003	4	51	151
2004	14	23	123
2005	34	38	138
2006	61	30	130
2007	34	2	102

Source: The Economic Times

So if an investor has invested Rs 100 and gets 14% return the index is 114. If he loses 5% the index is 95. We have further analysed the trend of this index in terms of annual compound growth rate. This index enables study of negative and positive numbers as a trend.

The above table shows that the average listing gain was 14% in the year 2000, that reduced sharply to -44% in the year 2001 and correspondingly there were only 2 IPOs in the whole year 2001, that reflects the loss of faith of investors in IPO market. This momentum continued in the year 2002 with only single IPO in the whole year and that too with listing loss of 5%. But the situation improved in the year 2003 with 4 IPOs and 51% average listing gains. In the next year the number of IPOs increased to 14 and the average listing gain was 23%. The average listing gain have fallen sharply from 38% in the year 2005 to as low as 2% in the first half of the year 2007.

The initial public offerings through book building which has come out in India between 2000 and 2007 is 159. Out of the 159, book built initial public offerings, two-third saw listing gain. However these gains have evaded sharply in recent age, while the listing gain was 38% in 2005 over 34 investors it fell to 30% in 2006 over 61 investors and to 2% in 2007 till mid-April over 34 investors. The main reason behind the sharp fall in listing gain is aggressive pricing. Aggressive pricing means that the scrip has often being priced at the high end of the pricing range which would, restrict the upward movement of the



stock, leading to reduced listing gains for the investors.

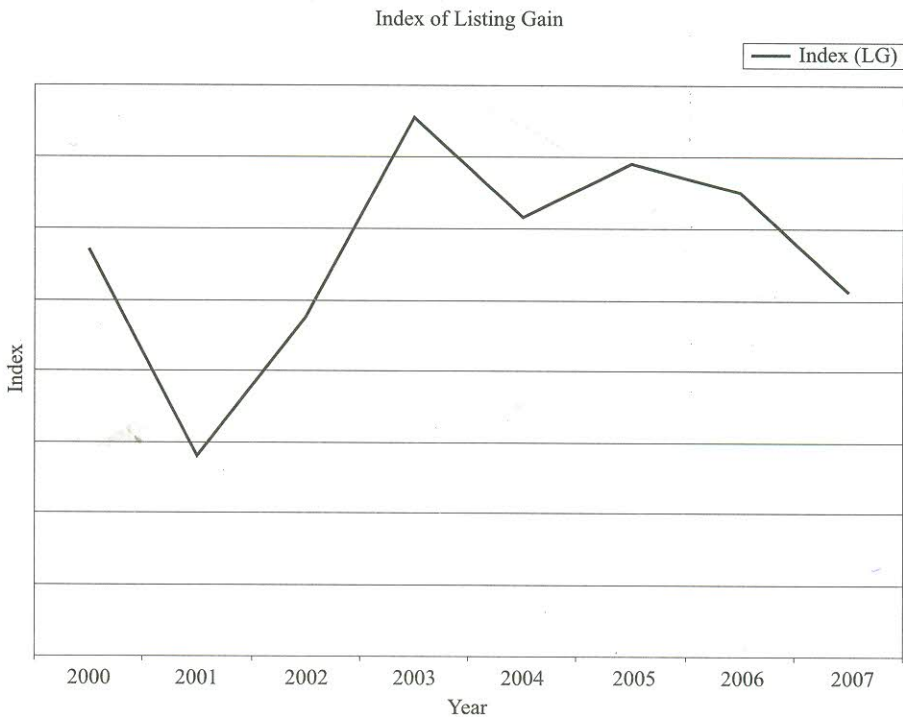
The average listing gain varied from a maximum of 51% in 2003 to a low of -44% in 2001. This shows a highly volatile market. The volatility is reflected in index of listing gain.

The growth in the index of listing gain is calculated in two ways:

- From the year 2000 to year 2007.
- From the year 2002 to year 2006.

The reason behind this categorization is that the year 2000, 2001 and 2007 are the abnormal years. In the year 2000, there was an IT bubble. As a result there was some rise and some downfall, and the average listing gain appeared to be 14%. In the year 2001, there was Ketan Parekh scam because of which there were abnormal returns of -44%. The year 2007 is also eliminated as there was starting of global financial crisis.

Figure 1.4: Index of Listing Gain



## (a) Growth in Index of Listing Gain (Year 2000 to 2007)

SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.380735331				
R Square	0.144959392				
Adjusted R Square	0.002452624				
Standard Error	2.44648406				
Observations	8				
ANOVA					
	df.	SS	MS	F	Significance F
Regression	1	6.088294478	6.088294478	1.017211	0.35211
Residual	6	35.91170552	5.985284254		
Total	7	42			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	1999.924897	3.64873543	548.1145277	2.49E-15	
Index (LG)	0.031464054	0.031196742	1.008568581	0.35211	Not significant
Growth Rate	3.15%				

The results show that the index of listing gain has grown at the rate of 3.15% p.a. compounded annually over a period of 8 years starting from year 2000 to 2007. But the results are not significant as the p-value is 0.35.

## (c) Growth in Index of Listing Gain (Year 2002 to 2006)

SUMMARY OUTPUT					
Regression Statistics					
Multiple R	0.431471638				
R Square	0.186167774				
Adjusted R Square	-0.085109634				
Standard Error	1.647050116				
Observations	5				
ANOVA					
	df.	SS	MS	F	Significance F
Regression	1	1.861677745	1.861677745	0.686263465	0.468189844
Residual	3	8.138322255	2.712774085		
Total	4	10			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	1999.838987	5.076610639	393.9319222	3.60742E-08	
Index (LG)	0.032661013	0.039426136	0.828410204	0.468189844	Not significant
Growth Rate	3.2%				

When we analysed the index of listing gain from the year 2002-06, it has grown at the rate of 3.3% p.a. But this growth rate is not significant as the p-value is 0.47. This clearly shows that even if we account for abnormal prices, basically, listing gain has been so volatile that we cannot conclude that the investors have gained.

## 6.0 CONCLUSION

While IPO pricing is a market signal for efficiency of the primary market unless the pricing is rational it will not lead to the proper development of the long term capital market. Most of the extant studies concentrate only on such a criterion for assessing market efficiency. Especially, the extant studies concentrate on the listing gains.

In this paper we have adopted a different approach coined as '*Historical Approach*'. This is policy orient approach to study market efficiency. It is based on the notion that with



liberalization markets assume maturity and become more 'efficient' in discriminatory between 'good' and 'bad' issues. The focus is on explaining how the IPO market leads to losses and gains amongst the two main market participants – the IPO Company and the investors.

During the period 1992-2010 we have studied three variables through a set of semi-log equations. It has been seen that the number of issues have been declining rapidly at the rate of 18% per annum, while the market capitalization has been growing at the rate of 7.6% per annum. This has led to larger the issue size growing at the rate of almost 26% per annum. Hence, there have been larger the gain for the IPO companies. However, the investors' gains are ambiguous. An innovative index of Listing Gain has shown this result. This is because rational pricing has not been taking place. If this trend continues, there will be no balance. In the long run investor will be driven away from the IPO market. If this happen, then loss will be of all the market participants and the long run objective of the primary market will not succeed.

Therefore, the historical approach employed in our study tells us, as a broad conclusion, that the Indian IPO market has grown since liberalisation and quality of issues has vastly improved. This speaks well for the overall impact of the new policy regime. However, this

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