

**COMPARISON OF IPO PERFORMANCES OF FACEBOOK, GOOGLE AND
TWITTER USING MAAR AND BHAR MODELS**

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Abstract

This study examines the underpricing and long run performance of Facebook, Twitter and Google IPOs using the Market Adjusted Abnormal Return (MAAR) and Buy and Hold Abnormal Return (BAHR) methodologies/ models. Twenty three firms listed in at NASDAQ and NYSE, have been taken as a sample to conduct these tests. In the first phase of the study underpricing test has been conducted using Market Adjusted Abnormal Return. The sample has been broken down to conduct test in four patterns. For complete sample of twenty three firms, for subject companies only (Facebook, Twitter, Google and LinkedIn), and separate tests have been conducted for both NASDAQ and NYSE. The same pattern has been adopted to conduct Buy and Hold Abnormal Return test as well. The results confirm that the companies included in the sample are underpriced and in the long run under-performance has been observed. The same results have been generated for each of the four sample sets as tested separately. Furthermore, results of the study correlates with the theory stating that "higher the underpricing higher would be the long run under-performance by the firm". The study is concluded by comparing the results with literature, news and sentiments dominating the market. This study has realistically analyzed in detail the IPO performances of the internet based listed firms operating in the United States of America.

Key Words:

Initial public offering; market adjusted abnormal return, buy and hold abnormal return, underpricing

I. INTRODUCTION

Internet commercialization along with boost of World Wide Web in early 1990s resulted in creation of an electronic bazaar globally. Creation of this marketplace brought a sheer increase in number of firms working on Digital Products & Services, every year since then. Targeting the variety of business fields e.g. entertainment business including music and movie industry, usage of these digital products increased due to introduction of multimedia layouts for these industries. It came as a trend changer as possession of the products could be handed over to buyer electronically. Similarly, in industries dealing with services based on transactions (for example: career, financial, gaming and travel etc.) also showed a significant growth in terms of digital products. Marketing of these products using internet channels like company websites and associated websites have become a need of the hour to promote the business for stakeholders of these industries.

Including the discussion regarding social networks sites in this specific study (as two out of three focused organizations are social networking websites i.e. Facebook and Twitter), users of these networks are rapidly increasing around the globe. Successful internet products like Facebook, Twitter, Zynga Games and other websites providing social media forums have introduced new opportunities to the software development market. As this growing market is introducing new star entrepreneurs like Mark Zuckerberg, Jack Dorsey, Brian Acton and Jan Koum, having non-financial backgrounds, financial management is a key challenge for such organizations. Growing avenues for these companies from desktops and tablets to cellular applications target user market is very huge and so is the challenge to meet up the requirements of financial resources obligatory for such digital products and services dependent firms. Entrepreneurs working for such products are having an enormous business potential as a recent business transaction of WhatsApp selling to Facebook in 17 billion dollars (in cash) highlights the market potential. On the other hand when such organizations go public first time, right decisions at right time are required as these business models are carrying more vulnerability within their structure in comparison to traditional business models. So when Facebook and Twitter went public initial performance of their IPOs disappointed the investors and were quoted as overvalued by analysts in the news as analyzed by Bradshaw (2013).

Managing traditional businesses with physical goods and services is different than businesses based on digital products or services and such differences also create impacts while making decisions for different business functions. Unique advertising or pricing strategies are often required for these businesses in comparison to traditional businesses. Cross industry partnership along with innovation may be an opportunity for such firms but on the other hand, having the digital products increase the security threats which require sufficient measures to encounter such threats. The 1990s famous internet bubble suggests that investing or financing for Digital Products and Services firms is a unique challenge as uncertainty lie to a greater extend. These firms carry large upfront costs and to get business success vigilant investment decisions are required to get sufficient capital. When it comes to DPS firms, it is not an easy task to take right decision on right time (Klobuncik & Sieveres, 2013).

Sherfin (2013) wrote about different performance perspectives of Twitter and Facebook IPOs. According to him the first day performance was not very well for most of the investors especially who held the stock till closing bells. He was of the view that "buy and hold" decision should be the call for investors as he referred Twitter's stock as a "long shot". Further it was referred that closing above the offer price at first day of the trading was a typical phenomenon. This phenomenon dominated the market in internet bubble days mostly as upto 65% price pop was observed by the market which was comparatively much higher to the set and expected range of 7-15%. Twitter's price increase went upto 73% as he refers and it was redolent to late 90s when companies were allowed by the investor's psychology to show high prices with unreal optimism about the profits. Second factor highlighted in his article was holding the shares for about six months after buying and such investors seemed to earn better profits. Long term under performance is also discussed as above trading practice is compared with those investors who buy and hold the stock for six months which is already public (not a newly issued stock). Another factor is setting a low IPO share price which is not beneficial for the original shareholder. If price pop is observed for first day

of trading, a temporary impact on their wealth can be there but not much and persistent as it should have been as per general understanding. Being a billionaire as these price pop ups go ahead, is another psychological illusion and companies like VA Linux having price increase upto 700% went shutting the operations down later on. Twitter's stock is compared with Palm whose offer share price of \$38 had an astonishing opening of \$165 and closed back at \$95. According to author pattern of Twitter's IPO performance remained on the same pattern and Palm was lately sold to the HP. The key point of his article discusses about comparing Facebook's IPO performance with Twitter's, and highlighting that people who are saying Facebook IPO a failure and Twitter IPO a success, might not be right as original shareholders of Facebook were found interested to avoid underpricing of the shares and managed to do that. These first day price pop ups are actually nothing more than psychological price illusions and success of IPOs in long term is not necessarily related or linked with this hype.

Bradshaw (2013) and Klobucnik & Sievers (2013) in their respective articles published in Financial Times and Journal of Business Economy reviewed the Twitter's IPO launch scenario as S1 filing (documentation containing IPO applicant's particulars and requests to SEC for going public) was registered by the company. According to authors Twitter's initial public offering was most anticipated one after Facebook went public. Speculation was launched immediately as tweet announcing the documents submission came from official account of the company. As quoted in the article before announcing the S1 filing Twitter was evaluated by a fund manager organization for about 10 billion dollars which included the employees of the company as well. The speculative valuation figure for Twitter IPO by Silicon Valley was around \$15 billion. Estimated IPO valuation figures as described by the authors were ranging in between \$13.7bn to \$14.4bn. Meanwhile the Facebook shares were traded for about \$45 after being lower than offered price of \$38 for almost a year as Morgan Stanley was criticized for mishandling the Facebook IPO. These discusses articles by Bradshaw, Klobucnik & Sievers states that this is the reason why Goldman Sachs was preferred by Twitter as an underwriter for the IPO. Moreover, Twitter was observed to be hype avoiding as it intended to go to public because Facebook's high price offering was backed by this reason while LinkedIn's model to go public was preferably better in this regard.

If we compare the analysis by Hersh Sherfin (a behavioral and psychological finance expert) of Forbes on the post IPO launch issues and the analysis given by Bradshaw and team in Financial Times both the news articles present different pictures as according to Sherfin post IPO launch was showing a clear hype ignited trading on first day and that will not stay for long to make the investors happy. In contrary to the above discussed views about subject IPO, Financial Times' team observed that Twitter's management wanted to avoid this hype factor so that stable and long standing investors can be attracted to the process, making factual position much ambiguous. One point which cannot be ignored was that an investment banker named Cynthia Gaylor of Morgan Stanley was hired as a Corporate Development head by the Twitter before S1 filing and IPO deals of Facebook and LinkedIn were managed by the same investment banker.

Another perspective on Twitter and Facebook IPO comparison was shared by Waters (2013) quoted Twitter stock as "another stock industry ignited hype" after the failed Facebook IPO. According to Sherfin Twitter's IPO was a failure as title and content of the article was suggesting

the same and here Waters tagged the Facebook IPO a failure. Waters (2013) had the same view about Twitter's handling of IPO arrangement like Bradshaw suggesting careful steps were taken by the company to avoid the trap in which Facebook was caught while going public. As article explains pre-launch scenario of Twitter IPO, it suggested number of things which Facebook did and Twitter could have also avoided. Waters was also of the view that IPO should not have been delayed like Facebook did and it backfired as trading went ahead for FB IPO shares. Holding the launch up to the last minute and keeping decision with Silicon Valley side, started an unannounced tension between the analysts, financiers from Wall Street and techies from the Silicon Valley. Delayed IPO valued the company for \$100bn which was good for early investors but a slight upside for the institutional investors who usually go to hold the shares after IPO is launched. One more comparison made in the article was that Twitter's organizational age was less than Facebook. Also when it comes to making profits from online users, the Twitter was lying way behind Facebook. Another suggestion was made in the article to avoid any hype in which Facebook was trapped by secondary market trading investors who actually faced the bad result of this hype covered IPO launch. Lastly, it was recommended to save itself from excitement which market and other factors will bring for the launch along with the volatility ignited by the speculators who want to earn from post launch trading at once. Facebook was not able to calculate market demand correctly because of these factors and the investors interested in flipping the shares to get a quick profit were wrongly incorporated in demand projections. Google's IPO launch is also referred in the article and analyst working on its IPO, Lise Buyer's strategy was recommended for Twitter which states that real auction based selling should be made for IPO shares which bring the investors on table holding highest offers with them and after the trading is started further superior bids would be negligible. Though a 15% price increase was observed for Google's shares on first day of trading as maximum clear price was not picked to price the IPO share but later on steady and long climbing prices ignored all the negative business factors happening for the company.

Within the 5 days of its launch, CNN's Julianne Pepitone reported the Facebook IPO's performance using terms like "breathlessly hyped" and "Wall Street debacle" along with inviting the lawsuits and market confusions around. A case was filed by the investors on Media reporting about classified information disclosure to selective investors as some analysts at Morgan Stanley received it and was not shared with all the stakeholders. Same reporting shares the NASDAQ's technical glitch happening on the first day of trading as complaints were submitted by the traders about bid price issues. About a year later reporters of Reuters and Daily Mail reported about shareholders anger towards Zuckerberg in a general meeting. At that time Facebook touched the figure of one billion users more than any existing social networking website in the world but talking about share price decline, 37% fall from the IPO price was observed after being traded at the low price of \$24 when this report was published. Mark Zuckerberg faced a hard time in questions answers session during the said meeting as shareholders talked about their sufferings due to price slump.

A. IPO underpricing - Theoretical Dimensions

To explain the underpricing of IPO different researchers have developed number of models (theoretical). However, a simple model based on theory which can describe all the factors having

impact on the underpricing does not exist. Winner's curse Hypothesis developed by Rock (1986) which was considered as one of the most widely known models. Investors were divided into two categories by him i.e. informed investors and un-informed investors. Investors which are characterized as informed ones tend to search for extensive information by incurring some evaluation costs.

Selling the securities to public through a primary market is known as Initial Public Offer (IPO). Usually the book building method or fixed price method is used for Initial Public Offering and a combination of both is also used in this regard. Talking about Fixed Price process, the security prices are already known to the investor before launch of IPO through this process. On the other hand, demand of the security is disclosed only after the closure of the issue. At the time of subscription, payment is made for the securities while refund is given in the post allocation period.

Main objective of any Initial Public Offering (IPO) can be referred as to get the maximum price/value for the issuing party while aligning the process to secondary trading and strong performance can be obtained for long term. Extensive research had been conducted on the specific problem of underpricing and results have shown clearly reported losses to the issuing party in result of it. While literature also shows that underpricing can be a factor generating positive signals for trading of secondary market and performance of aftermarket. A generalized explanation of the concept explaining underpricing tells that it actually arises because of news asymmetry resulting between well informed investors and those investors who have comparatively less information. Studied model proved that investors which are uninformed come across the winner's curse because of their chances for allocation of shares in the slots of unsubscribed vs. subscribed shares. This research also implicates that uncertainty for value of an IPO after it is issued creates the chances for more of uninformed investors and hence level of underpricing should be respectively greater to invite such uninformed investors (Rock, 1986)

B. IPO - An opportunity window for IT firms

Cater, Strader and Dark (2012), in their study, examined the timing factor for IPOs. Their research referred this timing factor as "window of opportunity" for the firms who are going for IPOs based on the stage wise development of relevant firms. The said study discussed the argument if those organizations having digital products and services are more critical for taking a timely decision for an IPO launch in comparison to traditional business firms. The discussed differences bring the following factors under discussion like winner-take-all theory, increased fixed to variable cost ratios, and entry barriers for new entrants etc. These factors have a collective impact on IPO process which narrows the timeline for firms dealing with digital products and services. If this timing factor is ignored it can bring effects which are not favorable for equity raising activity. The empirics of the study showed that the firms issuing IPOs earlier to the timeline receive lower offer prices for the share. Firms which issue the IPOs after the appropriate timeline (denoted as window of opportunity in the study) also tend to receive lower bids against the offered share prices and in comparison to the traditional businesses, deteriorated long term performance was usually experienced as literature referred.

Literature trend referred that research on initial public offering (IPO) discussion is usually

focusing the price arisen from offering date to trade day as a company goes public. Like Ritter & Welch (2002) and Lowry & Schwert (2002) presented, the agreement on it in their respective research studies. In addition to it literature trend also referred that risk to investors is directly associated with the discount on offer prices of shares. Researches by Ritter & Beatty (1986), Carter & Manaster (1990) and Rock (1986) gave the same theory in their studies. This widely referred theory said that higher the risk for investor, sharper the discount rate would be seen. Information from the issuer and the marketer (i.e. underwriter) is influencing the decisions of the investors being the superior informers. This impacted the projected exposure for risk which results in demand for greater discounts against the stocks. Against this theory an argument can be taken that timings of IPO for firms with digital services and products, is more crucial in comparison to firms with traditional business formats. Success or failure of the product introduced by such firms can be determined by the promptness or speed they opt to be a market leader. On the other hand if we take a traditional business in the same scenario, time margin they have can be used to turn failure into success by making the required changes to products. If the careful timeline is not followed by a firm with digital products and services, rising risks for the shares with an avoidable increasing trend, could result into disturbing discount demands by the investors or even with a failed IPO launch.

C. Internet Boom period and Lessons learnt (1999-2000)

Morgenson (2001) explained in his research that in the period of Internet Boom, some absurd criteria were used to evaluate the stock of internet companies. Non-financial merits like number of page viewers, shoppers engaged online and web traffic were used to justify the highly inflated technology stock prices. Moreover empirical evidences were not introduced in the process to ensure whether these non-financial factors can help future business growth or can be translated into projected revenue and company profit. During less heady times, valuing a stock would have been a pretty simple task as estimations were obtained with no proper supporting evidences. Assessing the net income of issuer along-with incorporating the factors like growth of issuing firm and the time value of money in association with market risk for the company, refers to a traditional stock valuation model. Intangible values such as the quality of management team of the issuing company, position of company with reference to prominent markets, technology value it is carrying, innovation capacity of the firm, all of these factors are incorporated in the stock price using this model. Before a company can go public by launching an IPO, traditionally it would demonstrate its stable growth besides a track record of showing consistent profits. On the other hand, internet companies did not show and profit despite pitching the pioneered activities which were supposed to bring revenues. Main focus by the market leaders at that time was to introduce new substitutes to these traditional and comprehensive patterns which incorporate the real and actual strength of the company at the time of IPO.

The literature takes into consideration more of the broad market and neglected hidden factors causing for the underpricing if we talk about specifically internet boom. Morgenson (2001) observed that there were many of the hidden beneficiaries from IPOs underpricing in that era (internet boom) like academics, congress and media persons. IPOs which are oversubscribed are a rare commodity due to the nature they possess. While trading the IPOs marked as hot, if investors are allocated for the product (luckily), they are provided a guarantee which is ensuring a profit

with carrying nil risk on it as the very shares would be flipped in the after-market. It is a legal obligation binding the investment banks by which they have to distribute the securities offerings bona fide. Which refers that investment banks cannot hold the hot IPOs with them. But on the other hand a full discretion is available for these investment banks for allocation of these hot demanding stocks. Typically, banks sell these stocks to their preferred clients like institutional investors. The pretentious aspect rises as these investors (institutional) are expected to receive the hot demanding stocks, and will act as sober client; eventually commission amounts and trading volumes would be increasing. Hot offerings are typically locked out for the small investors as they do not have connections with the Wall Street, unless it starts trading in the aftermarket. However, the internet boom had a major contribution from small investors as well as they actually provided the appetite to voracious market dealing with the technology stocks and eventually abnormally increasing the trading volumes along with sky rocketing stock prices. Insensitive sale pitches were made backed by the unrealistic analysis given by financial analysts who were on the payroll of the Wall Street. SEC later on advised the investors explicitly, not to rely on the reports and forecasts by the analysts only as a very negative role of them was exposed later on. In result a rush of complaints was observed specially from the investors who had lost the heavy investments in the market by relying on the recommendations by these analysts. Analysts were described carrying conflict of interest inherited, by the SEC. Whole of the IPO process seemed corrupted by investment banks of Wall Street which were assisted by frenziedly analysts' armies spreading unreal optimism. Meanwhile Corporate Executives, venture capitalists and institutional clients were approached with commercial bribery (legally backed). There is sufficient evidence that insiders from the Wall Street have earned very handsome money from the IPOs. From sixty to eighty percent of the usual IPO offering was earned by the institutional investors, syndicate managers acquiring mutual funds. The same study refers that as much as 125 mutual funds were identified during the internet boom period which collected eighty percent of the offering along with hatching 100% risk free profits as these stocks were flipped quickly in aftermarket. Further analysis showed that best performing stock periods were the times during which stocks were held by the financial institutions and then flipped within a week or two. When it comes to retail investors, they got 46% garbage stock i.e. the stock were flat or fell in the market. While only 24% of the stock showed a dramatic increase in the prices.

D. Recent approach to Firm Valuation for IPO

Cusumano (2012) developed a case study to discuss the factors which help in evaluating the worth of company as it intends to go public. The main question in the study was what exactly the worth is required by a company. It debates the difficult scenarios which exist in reference to this topic. When Facebook IPO was intended to launch in early 2012, it was one of the hottest topic in Wall Street in respect of company valuation. The social media company has become a giant with one billion users around the globe and is increasing every day. Its IPO was launched with a share price of \$38 per share and overall market value was of \$104 billion. The initial trend showed that 25% share price fall was observed within a week of the IPO launch. Market sentiment went further negative making its investors disappointed when in July earnings were announced in comparison to last year showing 32% growth. This growth was referred low in reference to projections made by the analysts creating a negative voice against the Facebook shares. On the other hand costs which company was carrying were very high as stock compensation was made for pre IPO and

charges of \$1.3 billion incurred in this reference. Analysts were not positive about revenues because reports were consisting of data showing increased number of mobile users for the social networking site, hence advertisement revenues were going down in result of it, and further a lowering operating profit figures came in result of all this chain. Due to this low company performance it was not a surprise for the market when further 20% share price went down. The final comment on company's value in the scenario remained questionable along with investors wondering that how high or low the share price should have been in the given circumstances. A general market trend show that the companies with internet or software based products pay very less or no dividend at all. Their focus of investment is intellectual capital instead of physical assets. So if we talk about evaluation models used traditionally by the financial analysts, like return on assets ratio, price to earnings ratio or dividend yield don't go well for such firms. Nonetheless a value would be suggested by the investment analysts and consideration will be made on this valuation by the investors to make a decision whether investment should be made or not. By considering the valuation model of Google (where company valuation was compared with sales to get a ratio value) one of the columnist (from The Wall Street Journal) said that maximum share price Facebook IPO share could be given is \$13.80. At this suggested price the valuation of total company would have been not more than \$38 billion. The researcher was of the view that there are chances which may tell that Facebook and similar stocks like Groupon and Zynga were overvalued by the analysts. Same sheer price fall from IPO issuance prices was faced by these companies as well. Company's performance can be evaluated for short term in this reference before and after IPO is launched. One more claim the study brings that there are some of metrics based on objectives which can be used by the investors to see if the long term investment decision should be made after evaluation or not. Before going in details about these concepts the researcher asked to understand the business economics which is underlying in general and i.e. how money is being made by the company or how company use to expense out its resources. In addition to this growth rate of the company should be compared with the competitor firms. The researcher developed a comparison between the Facebook and other IT companies which remain in highlighted news more often. The parameters which were used in the study to measure each company's performance in comparison to Facebook were Sales Growth percentage, Market value to sales ratio, Gross margin percentage, Operating profit percentage, Product sales percentage, R&D percentage, Sales per person (in USD millions) and prior year sales (in USD billions). By comparison analysis it was concluded in the study that high profit rates and high growth rates were assumed by the analysts for the Facebook which made the price of its IPO share very expensive. The study was not able to find if some alternate or better way to know in advance about what exactly the price should have been and this gap was admitted by the researcher. Prior to IPO company looked strong amongst different analysis made in the research like expense ratio, sales productivity, gross margin, sales growth and operating profits. The comparison of these figures with high class organizations like Google, Microsoft, Apple and other best performers showed that company had a solid standing in the market. One further gap which study admitted was that growth of Facebook cannot be measured to answer the questions like how fast would be the growth pace of the company and what cost company will have to bear to meet that growth rate. Facebook will need to adjust the profits as for mobile users and for PC users the profitability is way different. Expectations about the future of Facebook should also be adjusted by the investors as they speculate. To understand it an example with assumption can be taken that if Facebook

continues to grow at 32% annual rate (the very growth first quarter of post IPO phase reported) for upcoming five years and if the market cap along with stock price could be recovered to the level of IPO, then in 2016 seven times to Google the company would be standing. At that stage Facebook will be viewed as much less costly in comparison to the expensive picture it predicted in May 2012 when the IPO was launched. But again these optimistic projections are conditioned with big expectations. Crux of the study was that for IPO pricing there may be no exact science which may precisely and accurately be able to give a value. But business model can be reviewed by considering the real economic factors on which it is dependent and performance can be compared with the competitors to get a better projection about future worth of the company.

E. Population, Sample & Analysis Techniques

Analysis is run on the data of companies based on internet based products. These Companies are identified as competitors of Facebook, Twitter and Google Inc. by NASDAQ official website. Total of 44 companies are identified by the NASDAQ official website as competitor organizations of the subject companies of this study. These companies are listed on NASDAQ & NYSE. Out of the said population two sample sets of 23 companies are identified as 12 listed companies of NASDAQ Equity Index and 11 listed companies of NYSE Equity Index are shortlisted to run the analysis. Sample size is reduced as the companies whose IPOs were launched during the Internet boom period (1999-2001) are excluded. Literature review of this study referred in details the reasons and factors where IPO prices were abnormally overvalued. Such companies are excluded from the sample. Furthermore, the companies younger than one year IPO life are also excluded as to measure long run IPO performance bench mark is kept performance after one year of IPO launch. So companies which have been listed for less than one year have not been included in the sample. Event study methodology is opted to measure first trading day underpricing and long run underpricing of the sample IPOs.

F. Measuring the Underpricing

The underpricing of an IPO is measured by stock's initial return (of stock x) at the closing of d^{th} trading. While market adjusted abnormal returns are calculated for x stock by incorporating market return in the analysis, i.e. return obtained on benchmark index (NASDAQ Equity & NYSE Equity). Previously conducted empirical studies have studied IPO underpricing on the first trading date, while some other studies have protracted the concept by running the analysis for two weeks or first month of trading. This study just focuses the underpricing for the first trading day only to examine the short-run performance for IPOs for 12 companies listed on NASDAQ Equity Index and 11 companies on NYSE Equity Index.

The total return, i.e. raw return $R_{x,d}$ for x stock at the closing of the d^{th} trading day is measured as:

$$R_{x,d} = (P_{x,d}/P_{x,o}) - 1 \quad (1)$$

Where $R_{x,d}$ = return on x stock at the closing of the d^{th} trading day, $P_{x,d}$ = Price of x stock at the closing of the d^{th} trading day and , $P_{x,o}$ = offer price of x stock. The market return is calculated from benchmark index and it is calculated as followed:

$$R_{m,d} = (I_{m,d}/I_{m,o}) - 1 \quad (2)$$

Where $R_{m,d}$ = market return at the end of the d^{th} trading day, $I_{m,d}$ = value of market index at the closing of the d^{th} trading day and $I_{m,o}$ = value of market index on the offering date of stock x . Therefore, Market Adjusted Abnormal Return (MAAR) for x stock at the closing of the d^{th} trading day is, found as under:

$$MAAR_{x,d} = 100 \times (((1 + R_{x,d}) / (1 + R_{m,d})) - 1) \quad (3)$$

The IPO underpricing for short-run is known as this equation (3). Ljungqvist et al. (2006) found that underpricing can be investigated for a long period and it is referred appropriate as well by him especially for markets where post-IPO stock prices may take more time to get corrected and attain the equilibrium. The sample means MAAR for the d^{th} trading day is calculated as under:

$$MAAR_{x,d} = \frac{1}{n} \sum_{i=0}^n MAAR_{x,d} \quad (4)$$

Null hypothesis that the mean $MAAR_{x,d}$ equal to zero, is tested. For this hypothesis t-statistics is calculated as under

$$t = \frac{(MAAR_{x,d})}{(s/\sqrt{n})} \quad (5)$$

While s = standard deviation of $MAAR_{x,d}$ for n companies.

Hypothesis 1:

In reference to above discussion on MAAR our research hypothesis would be:

- i. MAAR = 0 (a)
- ii. MAAR ≠ 0 (b)

G. Measuring the Long-run IPO performance

Buy and Hold Abnormal Returns (BHAR) is used to test the each firm of sample for long run abnormal performance. It is the difference between long run holding period return for a reference asset and the long run holding period return for the company for which event is happening. Baber and Lyon (1997), Lyon, Baber and Tsai (1999) refers that reference return or benchmark return is a standard or reference portfolio. That is firm's portfolio is matched with each event firm considering the similar attributes like book to market ratio or size of the company. A single firm is benchmark as the control firm approach case is tested. For a null hypothesis of nil abnormal return the expected BHAR is zero for each event firm. Explanation or logic to this concept is that each BHAR calculates the difference between log run return of the firm and the proxy's long run return

which is designed to gain same long run return expected. Thus the model provide the distinctive risk and any abnormal performance prevailing. Under the null hypothesis zero risk is expected.

For a firm with stock i the holding period return (BHR) for T period is calculated as followed:

$$BHR_{i,t} = [(1+R_{i,1})(1+R_{i,2}) \dots \dots \dots (1+R_{i,t})]-1 \quad (6)$$

This formula can be written as:

$$BHR_{i,t} = [\prod_{t=1}^T (1+R_{i,t})]-1 \quad (7)$$

Where $R_{i,t}$ is the raw return if firm i stock at time t and T is the period against which the BHR is measured.

Following expression depicts the above explanation:

$$BHAR_{i,t} = \sum_{i=1}^N [(\prod_{t=1}^T (1+R_{i,t})) - (\prod_{t=1}^T (1+R_{m,t}))] \quad (8)$$

While $BHAR_{i,t}$ is the buy and hold return of firm i during event t . While $R_{i,t}$ is return in period t for i firm and return on benchmark for the same period is $R_{m,t}$.

Hypothesis 2:

Keeping in view the above discussion second hypothesis of the study to test long-run performance would be:

iii. $= 0$ (c)

iv. $\neq 0$ (d)

Data Analysis was made separately for both the stock exchanges i.e. NYSE and NASDAQ. Online link to Yahoo Finance, SEC official website, NASDAQ Official website and NYSE Official websites were used to obtain the secondary data required for analysis. Microsoft Excel was used to compile the required data and then run the test to acquire the analysis results.

II. RESULTS

Underpricing Test for IPOs at NASDAQ

The sample covers 12 IPOs listed on NASDAQ. All these IPOs are operated in information technology sector.

Table.1

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs
(Data Including Facebook and Google IPOs)

| S No | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|------|---|----------------|-------------------|--------------|
| 1 | Facebook Inc. (Fb) | 0.01 | -0.02 | 102.12 |
| 2 | 21Vianet Group, Inc. (VNET) | 0.25 | 9.07 | 11.44 |
| 3 | Baidu, Inc. (BIDU) | 3.54 | 0.02 | 445.61 |
| 4 | EnerNOC, Inc. (ENOC) | 0.20 | 0.04 | 114.12 |
| 5 | Google (Googl) | 0.18 | -0.07 | 126.06 |
| 6 | Kofax Limited | 0.14 | 0.07 | 105.70 |
| 7 | Professional Diversity Network LLC (IPDN) | -0.04 | 0.14 | 83.42 |
| 8 | Rocket Fuel Inc. (FUEL) | 0.93 | 0.05 | 183.64 |
| 9 | Synacor, Inc. (SYNC) | 0.03 | 0.14 | 89.21 |

International Journal Of Core Engineering & Management
Volume-3, Issue-10, January-2017, ISSN No: 2348-9510

| | | | | |
|----|-------------------------|-------|-------|--------|
| 10 | TripAdvisor Inc. (TRIP) | 0.05 | -0.04 | 108.93 |
| 11 | Wix.com Ltd. (WIX) | -0.01 | 0.03 | 95.00 |
| 12 | Yandex N.V. (YNDX) | 0.55 | -0.04 | 161.51 |
| | | 0.49 | 0.02 | 117.55 |

Analysis on data including Facebook & Google IPO:

Panel B: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 117.55% |
| S.D: | 30.57 % |
| t-Statistics: | 5.07 |
| p-Value: | 0.00 |
| Min value: | 83.42 |
| Max value: | 183.63 |
| N | 12 |

Analysis on data excluding Facebook & Google IPO:

Panel C: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 118.32% |
| S.D: | 33.60 |
| T-Statistics: | 11.13 |
| P-Value: | 0.00 |
| Min value: | 83.42 |
| Max value: | 183.63 |
| N | 10 |

Underpricing Test for IPOs at NYSE

The sample covers 11 IPOs listed on NYSE. All these IPOs are operated in information technology sector.

Table.2

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs

(Data Including Twitter and LinkedIn IPOs)

| S No | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|------|-------------------------------|----------------|-------------------|--------------|
| 1 | Twitter | 0.73 | 0.03 | 166.38 |
| 2 | 58.com Inc | 0.42 | 0.03 | 136.27 |
| 3 | 500.com Limited (WBAI) | 0.54 | 0.01 | 150.67 |
| 4 | Interxion Holding NV (INXN) | 0.06 | -0.01 | 105.95 |
| 5 | LinkedIn Corporation (LNKD) | 1.09 | 0.03 | 202.96 |
| 6 | Model N, Inc. (MODN) | 0.29 | 0.14 | 111.58 |
| 7 | Rackspace Hosting, Inc. (RAX) | -0.20 | -0.09 | 87.45 |
| 8 | Solera Holdings Inc. (SLH) | 0.15 | 0.06 | 107.79 |

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Volume-3, Issue-10, January-2017, ISSN No: 2348-9510

| | | | | |
|----|--------------------------------------|------|------|--------|
| 9 | The Rubicon Project, Inc. (RUBI) | 0.34 | 0.08 | 122.84 |
| 10 | Alibaba Group Holding Limited (BABA) | 0.38 | 0.04 | 131.79 |
| 11 | IHS Inc. (IHS) | 0.07 | 0.05 | 101.18 |
| | | 0.35 | 0.03 | 129.53 |

Analysis on data including Twitter & LinkedIn IPO

Panel B: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 129.53% |
| S.D: | 33.49 |
| t-Statistics: | 12.83 |
| p-Value: | 0.00 |
| Min value: | 87.45 |
| Max value: | 202.96 |
| N | 11 |

Analysis on data excluding Twitter IPO

Panel C: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 125.85% |
| S.D: | 32.87 |
| t-Statistics: | 12.11 |
| p-Value: | 0.00 |
| Min value: | 87.45 |
| Max value: | 202.96 |
| N | 10 |

Underpricing Test for complete sample of IPOs (All the 23 companies on NYSE & NASDAQ)

The sample covers 23 IPOs listed companies both on NYSE and NASDAQ. All these IPOs are operated in information technology sector.

Table.3

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs

(Data Including complete sample of 23 IPOs)

| S No | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|------|---|----------------|-------------------|--------------|
| 1 | Facebook (Fb) | 0.01 | -0.02 | 102.12 |
| 2 | 21Vianet Group, Inc. (VNET) | 0.25 | 0.01 | 123.39 |
| 3 | Baidu, Inc. (BIDU) | 3.54 | 0.02 | 445.61 |
| 4 | EnerNOC, Inc. (ENOC) | 0.20 | 0.04 | 114.12 |
| 5 | Google (Googl) | 0.18 | -0.07 | 126.06 |
| 6 | Kofax Limited | 0.14 | 0.07 | 105.70 |
| 7 | Professional Diversity Network LLC (IPDN) | -0.04 | 0.14 | 83.42 |
| 8 | Rocket Fuel Inc. (FUEL) | 0.93 | 0.05 | 183.64 |
| 9 | Synacor, Inc. (SYNC) | 0.03 | 0.14 | 89.21 |
| 10 | TripAdvisor Inc. (TRIP) | 0.05 | -0.04 | 108.93 |

| | | | | |
|----|--------------------------------------|-------|-------|--------|
| 11 | Wix.com Ltd. (WIX) | -0.01 | 0.03 | 95.00 |
| 12 | Yandex N.V. (YNDX) | 0.55 | -0.04 | 161.51 |
| 13 | Twitter (TWTR) | 0.73 | 0.03 | 166.38 |
| 14 | 58.com Inc | 0.42 | 0.03 | 136.27 |
| 15 | 500.com Limited (WBAI) | 0.54 | 0.01 | 150.67 |
| 16 | Interxion Holding NV (INXN) | 0.06 | -0.01 | 105.95 |
| 17 | LinkedIn Corporation (LNKD) | 1.09 | 0.03 | 202.96 |
| 18 | Model N, Inc. (MODN) | 0.29 | 0.14 | 111.58 |
| 19 | Rackspace Hosting, Inc. (RAX) | -0.20 | -0.09 | 87.45 |
| 20 | Solera Holdings Inc. (SLH) | 0.15 | 0.06 | 107.79 |
| 21 | The Rubicon Project, Inc. (RUBI) | 0.34 | 0.08 | 122.84 |
| 22 | Alibaba Group Holding Limited (BABA) | 0.38 | 0.04 | 131.79 |
| 23 | IHS Inc. (IHS) | 0.07 | 0.05 | 101.18 |
| | | 0.42 | 0.03 | 137.55 |

Analysis on data including complete sample of IPOs (23 companies):

Panel B: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 137.55% |
| S.D: | 74.03 % |
| t-Statistics: | 8.91 |
| p-Value: | 0.00 |
| Min value: | 83.42 |
| Max value: | 445.61 |
| N | 23 |

Underpricing Test for Subject IPOs (Facebook, Google, Twitter & LinkedIn)

Table.4

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs

(Data Including Facebook, Google, Twitter & LinkedIn IPOs)

| S No | Exchange Name | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|--------|---------------|-----------------------------|----------------|-------------------|--------------|
| 1 | NASDAQ | Facebook (Fb) | 0.01 | -0.02 | 102.12 |
| 2 | NASDAQ | Google (GOOGL) | 0.18 | -0.07 | 126.06 |
| 3 | NYSE | Twitter (TWTR) | 0.73 | 0.03 | 166.38 |
| 4 | NYSE | LinkedIn Corporation (LNKD) | 1.09 | 0.03 | 202.96 |
| Sample | | | 0.50 | -0.01 | 149.38 |

Analysis on data by including subject IPOs:

Panel B: Average Underpricing of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | 149.38% |
| S.D: | 44.48 % |
| t-Statistics: | 11.63 |
| p-Value: | 0.00 |

| | |
|------------|--------|
| Min value: | 102.12 |
| Max value: | 202.96 |
| N | 4 |

Long Run Performance of IPOs at NASDAQ

The sample covers 12 IPOs listed on NASDAQ. All these IPOs are operated in information technology sector.

Table.5

Panel A: Raw returns, Market returns and long run performance of Selected IPOs

| S No | Stock Name | Raw Return (%) | Market Return (%) | Long run Performance |
|------|---|----------------|-------------------|----------------------|
| 1 | Facebook | -0.33 | 0.23 | -55.57 |
| 2 | 21Vianet Group, Inc. (VNET) | -0.47 | 0.07 | -53.97 |
| 3 | Baidu, Inc. (BIDU) | -1.80 | -0.03 | -176.41 |
| 4 | EnerNOC, Inc. (ENOC) | -0.53 | 0.02 | -55.44 |
| 5 | Google | 2.11 | 0.09 | 202.34 |
| 6 | Kofax Limited | 0.03 | 0.27 | -23.42 |
| 7 | Professional Diversity Network LLC (IPDN) | -0.57 | 0.53 | -110.12 |
| 8 | Rocket Fuel Inc. (FUEL) | -1.42 | 0.26 | -167.36 |
| 9 | Synacor, Inc. (SYNC) | 0.10 | 0.24 | -13.87 |
| 10 | TripAdvisor Inc. (TRIP) | 0.45 | 0.08 | 37.31 |
| 11 | Wix.com Ltd. (WIX) | 0.05 | 0.21 | -16.94 |
| 12 | Yandex N.V. (YNDX) | -0.72 | -0.01 | -70.90 |
| | | -0.26 | 0.16 | -42.03 |

Analysis on data including Facebook and Google IPO:

Panel B: Average Long run performance of IPOs

| | |
|-------------------------------|---------|
| Average Long run performance: | -42.03% |
| S.D: | 92.87% |
| t-Statistics: | -1.47 |
| p-Value: | - * |
| Min value: | -176.40 |
| Max value: | 202.34 |
| N | 12 |

*P-value remained insignificant

Analysis on data excluding Facebook and Google IPO

Panel C: Average Long run performance of IPOs

| | |
|-------------------------------|---------|
| Average Long run performance: | -65.11% |
| S.D: | 68.55% |
| t-Statistics: | -3.29 |
| p-Value: | - * |
| Min value: | -176.40 |

Max value: 37.31
N 10

*P-value remained insignificant

Long Run Performance of IPOs at NYSE

The sample covers 11 IPOs listed on NYSE. All these IPOs are operated in information technology sector.

Table.6

Panel A: Raw returns, Market returns and Long run performance of Selected IPOs

| S No | Stock Name | Raw Return (%) | Market Return (%) | Long run Performance |
|------|--------------------------------------|----------------|-------------------|----------------------|
| 1 | Twitter | -0.18 | 0.13 | -130.60 |
| 2 | 58.com Inc | -0.91 | 0.12 | -21.10 |
| 3 | 500.com Limited (WBAI) | 0.32 | 0.10 | -77.79 |
| 4 | Interxion Holding NV (INXN) | -0.02 | -0.04 | -94.37 |
| 5 | LinkedIn Corporation (LNKD) | 0.11 | -0.09 | -79.90 |
| 6 | Model N, Inc. (MODN) | -0.57 | 0.31 | -188.36 |
| 7 | Rackspace Hosting, Inc. (RAX) | 0.35 | -0.30 | -34.90 |
| 8 | Solera Holdings Inc. (SLH) | 0.46 | 0.02 | -56.22 |
| 9 | The Rubicon Project, Inc. (RUBI) | -2.11 | 0.12 | 99.49 |
| 10 | Alibaba Group Holding Limited (BABA) | -0.12 | 0.04 | -116.03 |
| 11 | IHS Inc. (IHS) | 1.21 | 0.23 | -2.23 |
| | | -0.13 | 0.06 | -67.99 |

Analysis on data including Twitter and LinkedIn IPOs

Panel B: Average Long run performance of IPOs

Average Long run performance: -67.99%
S.D: 74.25%
t-Statistics: -3.04
p-Value: -*
Min value: -188.36
Max value: 99.49
N 11

*P-value remained insignificant

Analysis on data excluding Twitter IPO

Panel C: Average Long run performance of IPOs:

Average Underpricing: -69.30%
S.D: 78.16%
t-Statistics: -2.94
p-Value: -*
Min value: -188.35
Max value: 99.49
N 10

*P-value remained insignificant

Long Run Performance of complete sample (23 companies of NASDAQ and NYSE)

The sample covers 23 IPOs listed companies both on NYSE and NASDAQ. All these IPOs are operated in information technology sector.

Table.7

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs
(Data Including complete sample of 23 IPOs)

| S No | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|------|---|----------------|-------------------|--------------|
| 1 | Facebook | -0.33 | 0.23 | -55.57 |
| 2 | 21Vianet Group, Inc. (VNET) | -0.47 | 0.07 | -53.97 |
| 3 | Baidu, Inc. (BIDU) | -1.80 | -0.03 | -176.41 |
| 4 | EnerNOC, Inc. (ENOC) | -0.53 | 0.02 | -55.44 |
| 5 | Google | 2.11 | 0.09 | -55.57 |
| 6 | Kofax Limited | 0.03 | 0.27 | -23.42 |
| 7 | Professional Diversity Network LLC (IPDN) | -0.57 | 0.53 | -110.12 |
| 8 | Rocket Fuel Inc. (FUEL) | -1.42 | 0.26 | -167.36 |
| 9 | Synacor, Inc. (SYNC) | 0.10 | 0.24 | -13.87 |
| 10 | TripAdvisor Inc. (TRIP) | 0.45 | 0.08 | 37.31 |
| 11 | Wix.com Ltd. (WIX) | 0.05 | 0.21 | -16.94 |
| 12 | Yandex N.V. (YNDX) | -0.72 | -0.01 | -70.90 |
| 13 | Twitter | -0.18 | 0.13 | -130.60 |
| 14 | 58.com Inc | 0.91 | 0.12 | -21.10 |
| 15 | 500.com Limited (WBAI) | 0.32 | 0.10 | -77.79 |
| 16 | Interxion Holding NV (INXN) | 0.02 | -0.04 | -94.37 |
| 17 | LinkedIn Corporation (LNKD) | 0.11 | -0.09 | -79.90 |
| 18 | Model N, Inc. (MODN) | -0.57 | 0.31 | -188.36 |
| 19 | Rackspace Hosting, Inc. (RAX) | 0.35 | -0.30 | -34.90 |
| 20 | Solera Holdings Inc. (SLH) | 0.46 | 0.02 | -56.22 |
| 21 | The Rubicon Project, Inc. (RUBI) | 2.11 | 0.12 | 99.49 |
| 22 | Alibaba Group Holding Limited (BABA) | -0.12 | 0.04 | -116.03 |
| 23 | IHS Inc. (IHS) | 1.21 | 0.23 | -2.23 |
| | | -0.07 | 0.11 | -63.66 |

Panel B: Average Long run performance of IPOs:

| | |
|-----------------------|---------|
| Average Underpricing: | -63.66% |
| S.D: | 67.32% |
| t-Statistics: | -3.13 |
| p-Value: | -* |
| Min value: | -188.35 |

Max value: 99.49
N 23

*P-value remained insignificant

Long Run Performance of subject IPOs (Google, Facebook, Twitter, LinkedIn)

Another test was run by considering the data of subject IPOs only and results remained as under:

Table.8

Panel A: Raw returns, Market returns and Underpricing of Selected IPOs
(Data Including Facebook, Google, Twitter & LinkedIn IPOs)

| S No | Exchange Name | Stock Name | Raw Return (%) | Market Return (%) | Underpricing |
|--------|---------------|-----------------------------|----------------|-------------------|--------------|
| 1 | NASDAQ | Facebook (Fb) | -0.33 | 0.23 | -55.57 |
| 2 | NASDAQ | Google (GOOGL) | 2.11 | 0.09 | 202.34 |
| 3 | NYSE | Twitter (TWTR) | -0.18 | 0.13 | -130.60 |
| 4 | NYSE | LinkedIn Corporation (LNKD) | 0.11 | -0.09 | -79.90 |
| Sample | | | 0.43 | 0.09 | -15.93 |

Panel B: Average Long run Performance of IPOs

| | |
|-----------------------|---------|
| Average Underpricing: | -15.93% |
| S.D: | 148.83% |
| t-Statistics: | -0.21 |
| p-Value: | _* |
| Min value: | -55.57 |
| Max value: | 202.34 |
| N | 4 |

*P-value remained insignificant

III. RESULTS DISCUSSION

Stock outperformed in post launch phase:

After the detail data analysis and literature review, it is concluded that IPOs of the companies like Facebook, Twitter, LinkedIn outperformed in post launch phase as well as the long term performance of these IPOs have shown good market performance. As competitors of Facebook and Twitter remained the subject of whole research, companies like Baidu Inc., 58.com Inc., LinkedIn Corporation, HIS Inc. and TripAdvisor Inc. are amongst the top performers in the industry and strong figures out of thorough analysis show that market is performing well specifically for the business segment where organizations are earning from digital products and services. Furthermore, both the tests give positive results and any negative outcome is not observed for any of the organization from the data sample. Tests are run to check the long run performance and IPO underpricing and results remained healthy for both of research's questions.

Highly underpriced stocks:

Results of underpricing test reveal that stock of sample companies remained highly underpriced with as much high figure as of LinkedIn with 202%. It actually reflects the gap between value of the IPO share on which it is launched and value of the IPO share where it closes on the first day of trading. Other star organizations which are highly underpriced as the results refer to are (From NASDAQ Listings) Baidu Inc. 445%, Rocket Fuel Inc. 183%, Yandex N.V. Inc. 161%, (From NYSE Listings) LinkedIn Inc. 202%, Twitter Inc. 166%, 500.com 150% and Ali Baba Group Holdings Limited 131%. On average, data sample from NASDAQ (12 companies) remains 145% underpriced with average raw return of 48% and data sample from NYSE (11 companies) remained 130% underpriced with average raw return of 35%.

Negative long run performance as literature suggested

Results of long run performance analysis give the negative figures as literature suggested many times and no surprise is observed. Talking about result figures analysis is conducted on the sample consisting of 12 NASDAQ companies only and they underperform -42% and while subject IPO companies Facebook and Google are excluded from the data sample under-performance is further decreased to -65.11%. Similarly, when test is conducted on the sample consisting of 11 NYSE companies only under-performance remains way lower than NASDAQ data set as it showed -67.99%. By excluding the subject IPO Twitter, this under-performance goes further down to the level of -69.3%. In the third phase of the long run performance analysis using BAHHR sample of all 23 companies (from both the stock exchanges NASDAQ) are considered to conduct the test and overall under-performance of 63.66% is observed. Furthermore, test is also conducted by considering four subject organizations Facebook, Twitter, Google and LinkedIn only and it is revealed that overall under-performance of 15.93% is observed for this data set. It is pertinent to mention that Google individually outperformed in long run with 202%, the reason why under-performance figure is comparatively low to industry and stock exchange focused results. Analysis of Literature review shows that higher the underpricing is, more the under-performance would be observed in the long run (Hoberg, 2007; Dimovski et. al., 2011). Hence the results obtained are supported by already conducted research on underpricing and long run performance for other sectors.

IV. CONCLUSION

The conclusion of the study conducted can be extracted from three perspectives. The news analysis and reporting on the IPOs launched by Facebook, Google and Twitter; literature review (especially the way internet boom was managed by the analysts) and results obtained in this study after detailed analysis on IPOs' performance of these internet based companies. As underpricing of the IPOs is tested along with long run performance results compared with literature and news reporting/ analysis describes a new picture of the market. Cusumano's (2012) claim in his research about overpricing of Facebook shares and analysts' worries about Facebook and Twitter post IPO price glitch does not sound that clear as 2012's second half and 2013's first half remained dominated with news about Facebook and Twitter IPO performance, because of the mixed sentiment from analysts prevailed for both the IPOs in their first year of launch. From, The Wall Street Journal to Financial Times and channels like CNBC to Bloomberg shared a perspective, whether if these internet based businesses can perform that well while going public like the

traditional businesses as they have to offer physical non-virtual products with tangible economy involved. As quoted above, the news analysis and reporting in the introductory part of the study there was ambiguity about how Facebook shares would be performing in the long run and if Twitter would have been able to use the lessons learnt from the glitches in Facebook IPO launch. Another concern which literature highlighted is the issues of tech IPOs as analysts mishandled them during the period of internet boom. Underpricing of IPOs and results of performance in the long run as quoted above shows that things didn't go that bad as internet boom period showed the underpricing upto 700% (case of VA Linux discussed above), though initial price pops were observed for all three companies, Google, Facebook and LinkedIn (historical prices and media reporting referred in the study) but these are manageable and not on the patterns literature quoted about companies like pets.com, boo.com and VA Linux. This comparison makes it clear that evaluation of the companies were made in a more practical way and the performance of IPO is more related to the current performance (News reporting about Facebook first quarter revenue falls and share price falls). In the second scenario, the results of underpricing and long run performance can be compared with the analysts' comments and projections about the Facebook and Twitter's IPOs as they faced difficult times in pre and post launch periods. Twitter was referred to as a failure by Sherfin (2013) but on the other hand, he suggested that it was an investment to be retained for long term and will payback. If we compare, the analysis by Hersh Sherfin of Forbes on the post IPO launch issues and the analysis given by Bradshaw and team in Financial Times both the news articles present different pictures. According to Sherfin post IPO launch was showing a clear hype ignited trading on first day and that will not stay for long to make the investors happy. Contrarily, Financial Times' team observed that Twitter's management wanted to avoid this hype factor so that stable and long standing investors could be attracted to the process, making factual position much ambiguous. Richard Walter of Financial Times also has the same perspective about the Twitter's IPO launch management and he tagged Facebook IPO as a failure. The facts and figures of this study present another perspective to what actually IPO performances were as discussed above in detail and a more neutral and analysis based sentiment comes out in this regard.

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