Chapter II

Review of Literature

The previous chapter has discussed the introductory part and history of the investors’ rationality and the IPO price performance. In this chapter, the literature review of the study has been discussed in detail. The investors’ rationality and IPO performance issue has been used widely in the area of stock investment and investors investing decisions. This area has received lots of attention from Daniel Kahneman, Amos Tversky and Richard Thaler who discussed the concepts as behavioral finance, rationality of the investors, investment decisions and the factors affecting the rationality of the investors. And author Jay R. Ritter discussed on the IPO pricing and performance. Numerous existing past studies have depends on the famous models such as Sharpe’s, Treynor’s, Jensen’s Alpha and factor analysis which are still using for analysis of IPO performance data and investors’ rationality.

Thus, this chapter starts with the discussion of themes related to the investors’ sentiments, factors of the investors’ rationality and is followed by various aspects of the IPO pricing performance. This chapter examines the different issues related to this research work from the reviewing of previous studies. The published work has been reviewed for this study for the different aspects.

2.1 Behavioral Finance

It refers to the study of psychology of the investors in making investing decisions. It helps to perceive the investor’s investment decision which depends on the investor’s emotions and sentiments.

Tversky and Kahneman (1973) studied the behavioral finance concept which was came in existence during 1990s and author said about the rule of thumb in the decision making. It defined the three heuristics in making judgments in uncertain conditions were anchoring bias, representative bias and availability of instances and then in 1979 published paper defined the investors decision making power while face the losses with respect to the prospect theory. The prospect theory was defined as the intentions of the investors to invest in market whether invest after evaluation of the losses and gains or not. The author has developed the S- shaped prospect theory on which the investors are behaved risk aversion on the gains and risk seeking on the
losses. These are the two sides of the S-shaped theory. In 2002, the author Kahneman was awarded from the emerging paradigms of the behavioral finance.

Thaler (1980) defined the behavioral finance in terms of investors framing impact that how investors behaved on positive and negative information. It is the study of investor’s investing psychology and the psychology of analyzing the market information that how the investing is efficient. In this, some investors were fully rational or some were irrational in making investment decisions due to the emotions exuberance. After behavioral finance Thaler (1985) and (1999) described the new concept of mental accounting behavior of investors in which investors make assignments of money into different specific accounts mentally.

2.2 Investors Sentiment

It defines as the predictions of investors towards the performance of the stock market index before the IPO offerings. The investors’ behavior which is recorded at the market movements, is sometimes rational while other times investors behave irrationally towards the decisions of the investments in the stock market. The rising prices indicate the bullish market sentiment and fall in prices indicate the bearish market sentiment. This overall attitude of the investors towards the particular security in the market is referred to as the investor sentiment.

Talking about the investors sentiment Ljungqvist et al. (2006) say that when the investors’ sentiments were high or optimistic to the market then recorded more new IPO companies go public. Baker and Wurgler (2006) demonstrated the negative relationship between the investor sentiment and the return level of the IPO issue. If the investor’s sentiment was recorded high then the returns are low on small stocks, new young IPO stocks and on growth stocks. But if the investor sentiment was recorded low then the high subsequent returns from the IPOs at beginning stage were found for the young IPO stocks, small stocks, high volatile stocks, growth stocks and non dividend paying stocks. The IPO stocks were tending to be inversely related to the investor sentiment. Dhar and Goetzmann (2006) described the bubble behavior of the investors. The investors believed that the purchase of IPO shares on the time when the IPOs overvalued; they also anticipated that the investors behaved irrationally exuberant when the share prices continue to increase in coming days. Most of the investors being confused under the influence of sentiment, demanded the experts’ advise to analyze the overvalued and undervalued situation.
Zouaoui et al. (2010) documented that the use of investor sentiment was a predictor of the financial crises. The investors were highly sensitive to rumors especially in the IPO stocks. It was found that there was an inverse relationship between the investor’s sentiment and the future performance of the stock. The returns subsequently exhibited high trend when the sentiment of the investors were recorded too low. Guyo et al. (2011) showed that the young IPOs, less capitalized IPOs were found more sentimental than the older IPOs because young IPOs were more underpricing, difficult to value and investors were more fluctuating with the behavior of being pessimistic and optimistic. Wang (2011) described the investors’ sentiment as either optimistic or pessimistic. The informed investors sold the shares too soon at the short term profits and behaved optimistically by paying too much money for buying IPO shares with the motive of getting short term gains.

2.3 Noise Trader Sentiment

Noise trader sentiment refers to as investing on the basis of noise and also on information of the securities. This term has been used to describe the investors’ who influenced decision making regarding purchase and sell of shares without the use of fundamental data and make decisions of buy and sell shares with the use of private information. The noise trader investors are generally optimistically behaved on positive news and pessimistically reacted on the negative news. If the IPO shares recorded high fluctuations while trading then found high risk involved and faced by the noise trader investors. The greater the level of noise sentiment, more the investors invests in the IPOs. This is called the noise trader sentiment.

Trueman (1988) demonstrated that the noise investing was more commonly observed in the riskier assets. The analysis of this study showed that the uninformed investors will invest with positive news even though the investors did or didn’t possessed any private information but the informed investors strictly preferred to do invest when the investors have the private information otherwise stopped themselves to make any investing. The more risk averse the investors, expected level of noise was less. Lee et al. (1990) described in study that the noise trader sentiment shifted overtime, sometimes investors were excessively pessimistic about the future while at other times were overly optimistic. This behavior of investors happened due to the noise trading sentiment and showed the level of risk in the markets where the investors were
invested. When the noise trader investors become pessimistic about the future events, then this sentiment pushed down the price of closed-end funds below the net asset value.

Shleifer et al. (1991) documented that the investors noise trading sentiment was fluctuating and with this noise the investors sometimes overestimated the future period expected returns while at other times, the investors less estimated the IPOs returns for the coming period. Zouaoui et al. (2010) analyzed the consistent relation with the noise trading sentiments model. The investors made noise if the investors possessed the private information of the stock. Kumar and Lee (2006) found that the retail investor sentiment was consistent with the noise trading sentiment model.

2.4 Winner’s Curse

This means that some of the investors underestimated the value of the IPO and some investors overestimated the value of the IPO. People who overestimated it are called high bidders and pay too much attention for purchase of the stock to winner’s curse. The uninformed investors subscribe to every IPO but the informed investors buy only those new shares whose issue price is more than the listed price. The informed investors have better information to influence the underpriced issues while the uninformed investors tend to participate in the underperformed issues. To motivate the uninformed investors in this regard, the IPO companies sell the securities at discount to reduce the winner’s curse for the uninformed investors. But the uninformed investors bear the situation of winner’s curse in the presence of the informed investors.

Rock (1986) developed an adverse selection model in which the informed investors had superior information to influence the underpriced issues while the uninformed investors were forced to participate in the overpriced IPOs. In order to attract the uninformed investors, the IPO companies sell the shares to uninformed investors at discount to reduce the winner’s curse. Welch and Ritter (2002) suggested that the uninformed investors faced the winner’s curse situation when they fear that the investors receive full allocation when they behaved optimistically. The informed investors always receive the full shares allocation of underpriced stock while on the other side; the uninformed investors receive a full allocation of underperformed stock but partial allocation of overperformed stock due to the discrimination. Rocholl (2003) suggested that the underpricing phenomenon rationally described the winner’s curse that the winner’s curse was faced by the uninformed investors in the presence of informed
investors. The uninformed investors faced the both situations underpriced and overpriced phenomenon.

Lin et al. (2010) described that the investors were avoid winner’s curse situation and the investors were more likely to withdraw the issues if the offerings were less subscribed. The investors wanted to escape the cold market and join the hot market issues. It was found that the uninformed investors were more likely to win in the overpriced issued because the underpriced issues were taken by the informed investors and withdrawn at the overpriced issues by informed investors. When the uninformed investors withdraw from the overpriced issues, then the underwriters purchased those overpriced shares and suffer losses.

2.5 Disposition Effect

Disposition behavior means the tendency of the investors while investing that hold the losing investment too long and sell the winning investment too soon to earn profits. It is the pattern of the investors when they seek to realize the paper gains and avoid realize paper losses. The investors become loss averse when they face losses and the investors become risk averse when they enjoy making gains. The investors are keenly expectant to sold the IPO shares on more performance of IPOs and are interested to hold the IPO shares on low performance of the IPOs.

Odean (1998) demonstrated that the investors hold losing investment too long and sold winning investments too soon as they were reluctant to realize losses. The investors believed that today’s losers will soon outperform today’s winners. From this investors believed, it appeared to be motivated by a desire to rebalance portfolio or reluctant to incur the higher trading costs of low priced stocks. The investors were away from the selling of low performed shares to neglect losses or to avoid the high trading costs. Lin (2011) demonstrated the negative impact of disposition effect and males were shown to have stronger disposition effect than females. The investors become loss averse when they face losses and the investors become risk averse when they enjoy making gains. The preferences of the investors created distortions when the investors wanted to avoid realizing paper losses and seek to realize paper gains. Chen et al. (2007) found that Chinese investors were inclined towards the disposition effect in this study. The investors were avoid the paper losses and more likely to realize the paper gains. When the investor was to purchase the IPO stock and subsequently the price was declined, then this was referred to as a
paper loss. These investors tended to sell the winners stock too soon and hold the low performed stock too long with the hope that IPO market will bounced back in long run.

Yahazadehfar et al. (2008) described the disposition effect as positive and statistically significant with the regret aversion. If investors wanted to avoid the pain of regret from the wrong investment decision, the investors were tended to hold the paper gains stock when stock was fall and sold the paper gain stock when the stock was high to realize the paper gains. The investors must have to control on the irrational emotions while investing into the IPOs. Murthy and Joshi (2012) documented that the investors were totally supported the disposition behavior of investors. From the disposition behavior of investors, it was described that the investors were hold the losing investment too long unto the price will bounce back more to the issue price and sold the winning investment too soon. Sahni (2012) focused on the individual recent behavior and given less weight on past performance of the issues. It explained that the tendency of investors to hold on to loss making stocks while selling the winning stocks too early to earn gains by risk aversion.

2.6 Herding

The herding behavior is referred to as the behavior of the investors in which the investors blindly followed the decisions of majority people rather than relying on their own rational thinking. This behavior may occur frequently in the everyday decisions based on the learning from information of others. It is a mentality characterized by a lack of individual decision-making or thoughtfulness, caused investors to think and influenced them to act in the same way as the majority of investors move around them.

Yahazadehfar et al. (2008) showed the positive effect of herding and the regret aversion. The investors’ regret aversion behavior was influenced the investors to herd. If the investors investments turned out to be wrong then the investors believed that they were not the only ones who lost the investments thus, consoled themselves for the wrong investment decisions. Khoshirsat and Salari (2011) described that the investors had strong significant behavior effect. The investors followed the investing decisions of others to avoid the declining returns. The investors instinctively followed the majority decisions rather than relying on their own decisions. It tested the lower dispersion in the investors decision in the market downside movements period compared to the upside movements period. The investors followed the
investing decisions of others to avoid the declining returns. Lin (2011) described that the positive effect of herding and found that females were more prone to the herding than males. The herding bias is the behavior in which the investors unintentionally followed the decisions of majority rather than relying on own thinking.

2.7 Conservative Behavior

Conservative behavior is referred to as the behavior when the things changed but people tended to be slow to pick up on the changes. The conservatism behavior is totally opposite from the representativeness behavior. When the IPO situation changed, the investors might behave pessimistically because of their conservatism bias. But in the representativeness bias, people tended to overreact and put too much weight on the recent experience.

Ritter (2003) showed that it can be declared from the behavioral theories that with the variability of the market, the investors tended to be very slow to pick up on the changes. When the market changed or fluctuated, then the investors underreacted due to the conservative bias. Yahazadehfar et al. (2008) found the positive relation between the conservatism bias and the regret aversion. The investors were too conservative to make choices in the IPO stocks. The investors were conservative in choosing the IPO stocks because they tried to relieve themselves pain of the last mistake rather than committing a new mistake. Once the investors face the losses due to their wrong decision then, they found more hesitant to move again in the stock market and hesitant in make investing decisions again.

2.8 Overconfidence

Overconfidence is referred to as when the investors get more confident on their own knowledge and ability. The investors tend to believe that they were better than others in choosing the best performed IPO shares and they are better to analyze the perfect time to exit and enter in the IPO market under overconfidence behavior.

Daniel et al. (1998) demonstrated that overconfidence was consistent with long-run negative autocorrelation in stock returns and increases unconditional excess volatility. The biased self-attribution recorded the positive correlation in short run and negative correlation found in long run. The overconfidence and psychology of self-attribution of investment implies that the investors overreacted to the private information and under reacted to the public
information with respect to the IPOs. Odean (1999) developed a model which said that the investor who was more confident, makes more investment and had lower expected utility rather than the investors who were fully rational. The rational investors correctly forecasted the expected profits from the shares investment. If the ration investor found the IPO investment very expensive then they didn’t made more IPO investment due to the underperformance of IPOs and insufficient returns received from the investing. The investors invest too much when the investors become overconfident about the ability of interpreting the positive announcements. Hirshleifer (2001) explained that the overconfident investors were consistent in enhancing the self attribution bias. If the overconfident investors irrationally over-purchase the IPO shares, then in result, the low expected returns are earned by the investors. The overconfident investors more aggressively brought and sold IPO stocks with the help of their own valid information signals.

Lowry (2003) described that the investors were overly optimistic and willing to pay more to firms than the share worth it when the IPO market conditions were highly volatile. Ritter (2003) found more about overconfidence of investors’ behavior and said that they put too much weight on the recent experience. The females found less overconfident than the men. Ljungqvist et al. (2006) analyzed that the increase in optimistic sentiment, increases the IPO offer size and more IPOs go public. Due to overreaction investor sentiment, the IPO market was less underpriced and recorded underperformance in long run. The investors try to engage in excessive flipping to earn more return. Cornelli et al. (2006) documented that if the pre-IPO prices go high, then the investors behave overoptimistically and at low pre-IPO prices, the investors were excessively pessimistic. The reserved investors kept the allocated IPO shares and quickly resell those shares when the small investors overreacted. The investor’s over optimistically behavior found that when the grey market prices were high, the pre-IPO market prices were highly related with the post market IPO prices. On the contrary, the positive correlation was found low when the grey market IPO prices started to decrease.

Chen et al. (2007) described the Chinese investors’ behavior that the US investors were less overconfident than the Chinese investors. The overconfidence behavior lead to too much investment and hold onto the undiversified portfolios. Glaser and Weber (2007) predicted that the overconfident investors invested more than the rational investors in the IPOs. Lin (2011) demonstrated the positive impact of overconfidence and the females were psychologically less
confident and had more pessimistic sentiment than the males. The males were more overconfident and had optimistic sentiment. Females invest less aggressively or optimistically than the males and incurred less investing transaction costs and earn the less returns due to the overreacting behavior of males. Murthy and Joshi (2012) found that investors were overconfident while making decisions on the IPO investments. The investors overestimate the price level of the listed price and resulted in losses. Zaidi and Tauni (2012) showed the positive relationship between the overconfidence and the various personality traits as agreeableness, extroversion and consciousness but negative relation with the neuroticism personality trait. The investors were predicted to be more confident in picking up the IPO stocks. This resulted in excessive investing in IPOs. The overconfident investors overestimated the knowledge, underestimated the risk and exaggerated the ability to control the events.

2.9 Overreaction

Overreaction behavior refers to the tendency of the investors and the investors overreacted to a company’s announcement and on the new come up information. These reactions suddenly inflate or deflate the stock’s value, but only temporarily, until the impact of the announcement waves and the stock returns reverse back to its fair market price.

Thaler and Bondt (1985) demonstrated the reliable results of IPOs with the overreaction behavior; the investors paid too much attention to the current or positive information and tended overreact behavior of investors on the stock market dramatic and unexpected news announcements. The investor’s intentions believe that the today’s losers will be appreciated soon as the today’s winners. The authors were analyzed the investors’ decision making psychology on stock market movements. Bondt and Thaler (1987) documented that the earnings of winning and losing firms showed the past reversal pattern that was consistent with the overreaction. The investors gave overweight to the recent information and underweight to the past information and underreacted on the past information. Daniel et al. (1998) showed that the investors overreacted to the private information but underreacted to the public information of the IPOs prices.

Helwege and Liang (2004) explained the hot and cold IPO cycles and their reactions. The investors behaved aggressively or optimistically when the IPO market was showing the rising phase and recorded more underpriced performance. The investors overreacted on the high volume of IPO shares and IPOs were more times subscribed. Whereas at the cold IPO market,
the IPO market showed the less underpricing, less investor reactions, less IPO issuance and less IPO subscription offerings. The IPO companies found less concentrated in the sectoral performance when the IPOs recorded upward movement rather than the cold market IPOs. Zoghli and Matoussi (2009) described that the investors overreacted if the information was found positive and also followed the other reaction without getting tensed about the other information of detected stock prices fluctuations. The investors were very sensitive to the rumors also. The investors were influenced to make purchase orders when the rumor has positive news and sell the stock when the rumor was negative.

Zouaoui et al. (2010) documented that the investors overreacted to the rumors and overreacted when the issue price of the stock is less than the listed price and when the market was hot, then the investors overreacted to the stock market. Gupta and Samdani (2010) documented that the representative bias sentiment indicated overreaction on good or bad news while the conservative bias showed the underreaction on the important announcements. In the cold IPO cycle, the investors underreacted on the information recorded at the conservative bias but in the hot IPO cycle, the investor showed the representative sentiment and overreacted on the good or bad available information.

2.10 Underpricing

Underpricing is calculated in percentage by differentiating the issue price of the IPOs with the listing price of the IPOs. It is measured when the issue price is lower than the price on the IPOs listing day, then this stock is considered to be underpriced. The IPO shares were referred as underpriced temporarily due to the more demand of investors for IPOs than the supply of the shares. When the IPO shares are issued at the premium, then this underpriced situation also referred as the money left on table by the issuing companies.

Welch and Ritter (2002) described that the underwriters were encouraged the IPO companies to go public when the market was rising. In this, the IPO overperformance was called as the excess demand of investors for IPOs shares. Rocholl (2003) discussed in study that the higher allocation of overperformed IPOs received by the institutional investors. It was recorded that the institutional investors received more shares than the retail investors in all issues and a result; the institutional investors demand more underpriced issues than the overpriced issues. The underpriced issues found more investors demand than supply of IPO shares but the overpriced
issues found less investors demand of IPOs than the supply of IPO issues. Larry (2004) confirmed that the IPOs were underpriced due to the larger initial returns. The underpriced IPOs were defined as the premium IPOs that the subscribing investors receive at the initial stage of market trading. The IPO stock was followed by the immediate aftermarket by sizeable increases in the stock prices on an average and found larger initial returns of the IPO shares. The developing countries had higher underpricing levels than the developed countries.

Leite (2004) documented that greater the level of ex ante uncertainty faced by the IPO investors, more the IPOs underpriced level found. This study described that to determine the underpriced IPOs issue, the issuer company needed a benchmark against the IPO price to compare the issue price whether it was more or less than the next corresponding day price. Cassia et al. (2004) analyzed that the IPOs were intentionally higher underpriced with the used of fixed priced IPOs rather than on the bookbuilding IPOs. Ghosh (2005) demonstrated that the underpricing was more during the high volume boom periods than the slump period. It showed less underpricing for the IPO issues that collected large amount of funds from public compared to the smaller issues. Pastor and Veronesi (2005) found that IPO volume was high when the shares were overvalued. The IPO prices were very fluctuating in nature. Ljungqvist et al. (2006) described in study that the long run underperformance and the positive return performance of IPOs recorded negative relationship between each other. In the cold IPO market, the investors were pessimistically behaved and vice versa. In the pessimistic/cold market, the investors demand for IPO shares was less than the supply of IPO shares.

Ellul and Pagano (2006) documented that the IPO underpricing was higher for the shares and lower the expected liquidity, the higher the liquidity risk. The IPO underpricing was lower for the issues of older and the larger companies, which generally had less risk. Adams et al. (2008) showed that when the IPOs were significantly underpriced the issuing companies lose money called money left on the table. The underpricing was calculated as the difference between the first day listing price of the IPOs and the issue price of the IPO, divided by the issue price of the IPO. The issuing companies found more underpriced when the issue price of the IPO is less than the first listing day price of the IPO. Lin and Hsu (2008) analyzed that the IPO market was consistently recorded as underpriced. The investment firms were noted more underpriced than the trading and service firms were noted at the overpriced issue in the IPO market. The liquidity
appeared to be positively related to the new companies’ underpricing. The new issues were less underpriced due to the lower level of uncertainty in the IPO firms.

Chatzinas et al. (2009) described that when the IPO prices showed the positive returns on the listing day or in the short run then the IPO market considered as the underpriced issue. When the firms were hesitant to enter into the market, it was indicated as a reason for the inconsistent performance. The underpricing of IPOs was related to the winner’s curse situation. Bakke et al. (2010) analyzed in study that the IPO shares shown positive relation with the underpricing and the positive information in market. When the investors demanded higher compensation in the form of more underpricing, then the investors revealed the good news when the public information was bad. This was called incentive effect. When the investors investing information was positive and the private information was also likely to be favorable, the probability for underpricing of shares in the offerings was also relatively high. Thus the positive private information increased the probability of underpriced IPO called the demand effect.

Gupta and Samdani (2010) suggested that the IPOs were positively related with the high premium IPOs and weakly related with the low premium IPOs in both the hot and the cold cycles. Lowry et al. (2010) described that the IPO shares recorded positive returns in short run. Lin et al. (2010) found that if the IPO was underpriced, the informed investors received more allocation of the shares and the uninformed investors received the smaller allocations of the underpriced issues due to the presence of informed investors. Sharma and Seraphim (2010) demonstrated the inverse relationship between the underpricing and the underwriters’ prestige. Guyo et al. (2011) documented that all the IPO companies which were taken in this study sample showed that the IPOs were underpriced.

2.11 Overpricing

Overpricing is calculated when the issue price of the IPOs deviates from the listing day price of the IPOs and divided by the issue price of the IPOs. When the issue price exceeds the listing price of IPO, then the IPO was said to be overpriced. The closing price was assumed to be the equilibrium or the true value of the stock.

Lee et al. (1990) found that the purchase of overpriced shares showed the pessimistic behavior of the investors. Larry (2004) concluded that the issuers wanted to issue IPOs when the investors were optimistic about the growth potential of companies going public, and resulted in
the large IPO demand. Thus the issuing companies found more likely to go public in underpriced situation rather than overpriced performance. But at the overpriced stage, the IPO firms didn’t want to go public because of the low IPO demand. Leite (2004) documented that overpricing was more likely to be found when level of ex ante uncertainty is lower. The IPO was overpriced in equilibrium relative to an equally weighted average of aftermarket prices; it was never being overpriced relative to the float weighted benchmark used. The number of securities that were floated in the demand offerings was higher in the hot offerings than in the cold offerings.

Adams et al. (2008) analyzed that the investors will demand more IPO shares when the IPO market showed the positive returns and IPOs recorded high subscription level. But when the IPO was facing the cold phase, then the demand of the shares was less than the supply of IPOs. Murthy and Singh (2008) analyzed that the IPOs price performance were at boom stage if the IPOs was underpriced and considered the recession stage when IPOs were overpriced. Chatzinias et al. (2009) described that the new issuing companies were more likely to go public when the market was rising and in this phase, the IPOs were more underpriced, more positive returns recorded than the overpriced or low performed IPOs. Lin et al. (2010) found that if IPOs were overpriced, the uninformed investors were more likely to win over the overpriced IPOs except the underpriced issues because the informed investors withdraw at the overpriced market and join the underpriced market due to the received allocation from the issuers.

2.12 Long Run Performance

The long run performance is referred to as the investment performance in securities for more than one year. Short run performance is referred to as the investment of money into the less than one year securities. The investors may be interested in making a quick short-term profits from the fluctuations in the prices of securities in the stock market.

Bondt and Thaler (1987) demonstrated that for losers, the long term effect was negative and this effect was predicted by the investors’ overreaction, but for the winners the long term effect was positive. The IPOs negative return performance was negatively influence to the losers in short run and also in long run. Ritter (1991) showed that the long run performance was consistent with the IPO market in which the investors were overoptimistic about the earnings of the young growth companies. The long run underperformance of the IPOs was more consistent with the fads than the bad luck. Welch and Ritter (2002) evidence showed that the IPOs were
priced high in the short run relative to the long run time period. After the short run phase, the IPOs were more likely shown the negative outcomes in long run. Many times institutions used the flipping method to find out the long run returns or to earn returns. In the flipping method, the investors purchased the IPO shares and quickly turned around to sell those shares in market to make quick profit.

Larry (2004) concluded that the long term performance was not reliable with the results of fads and the windows of opportunity. Cornelli et al. (2006) analyzed the negative long run returns and this long run returns came after the initial underpriced IPO prices. Ljungqvist et al. (2006) suggested that the long run underperformance happened when the investor exuberant behavior started to rely on fads. There was negative relationship found between the IPOs positive return and the long run performance of the IPOs. Kumar (2008) book building IPOs showed that the IPOs significantly underperformed in the long run and overperformed in the short run.

Chatzinas et al. (2009) documented that the IPOs usually had poor stock price performance in the long run and the lowest long run returns recorded. The investors performed optimistically on high value of IPOs and pessimistically reacted on the low value of IPOs due to the IPOs uncertainty. As the time goes on and more information became available to the investors, then the market prices dropped down and investors were less willing to invest in low performed IPOs resulted in the long run underperformance. Chemmanur et al. (2010) demonstrated that the initial hot IPOs had poor long run performance than in the cold IPOs. The institutional investors hold the IPO allocations for a longer period and earned profits with the more allocation. The institutional investors sold the IPO allocation in high pre IPO demand and hold allocation in low pre IPO demand IPO’s.

2.13 Bookbuilding and Fixed Pricing Mechanism

The process of determining the price at which an IPO will be offering the shares to the general public is referred as to the bookbuilding method. It shows the indicative price band in which the lowest (referred to as the floor price) and the highest (the cap price) prices of the IPOs are mentioned through the shares can sold to general public. After the price band decided, the bids for the IPO shares are invited from the investors. Each investor decides how many shares the investor wants to buy and how much amount they are willing to pay for that IPO shares (depending on the price range). The actual issue price is then identified based on the bids. In the
context of prices, both the buyer and seller set the stock prices that how much amount they want to pay. The buyer determines that what price they will pay for the stock, this is called the bid price.

The seller also has a price which is called the ask price. The bid price is the highest price at which any investor is willing to pay for a security at a given time. The offer price is the lowest price at which the seller for IPO is willing to sell the share at that particular price. During the period when the book is open, bid information is collected from the investors by the underwriters. A book should remain open for a minimum of 5 days. After the collection of the bids, the issuer company decides the IPO issue price for coming up in the market with the help of underwriters. The bookbuilding method means the prices at which securities are offered not known in advance to the investors but in the fixed price method the price at which securities are offered is known in advance to the investors.

Ljungqvist et al. (2000), Sherman (2000), Cornelli and Goldreich (2001) described in studies that the use of bookbuilding method showed more accurate results. Bookbuilding had become the preferred method of pricing IPOs in market. Welch and Ritter (2002) found consistent with the bookbuilding theory and represented that the bookbuilding method was used to sell the IPOs for creation and measurement of the investors demand. Ljungqvist (2003) posit that bookbuilding reduced the initial IPO underpricing and consistently performed with bookbuilding pricing mechanism. Rocholl (2003) provided the evidence that the issuer and bookbuilding lead managers decide the issue price range in which the investors can start submitting the bids. Before the price range decision, the issuers decide the length of bookbuilding period. The IPOs with bookbuilding process were significantly less underpriced than in the fixed priced IPOs.

Cassia et al. (2004) described that the IPOs with bookbuilding process were significantly less underpriced than in the fixed priced IPOs. It showed that the bookbuilding IPOs allow for the reduction of uncertainty. The fixed priced IPOs were more underpriced. Ellul and Pagano (2006) analyzed the high adverse selection problems associated with the the bookbuilding method and fixed price method. The liquidity was more important for the IPOs carried out through fixed price method than through the bookbuilding method. Kumar (2008) found that in the Indian IPO market, the book building method was less underpriced than the fixed priced
method. Bakke et al. (2010) showed in study that the investors collected the public and private information. If the investors observed the positive information for IPO, then the investors submit the bids at high rate. Similarly, if the investors recorded negative information about the IPO market, then the investors responded to the submission of the low book building bid process.

Kumar (2010) found that in the Indian IPO market, the book building offer was less underpriced than the fixed priced offer. But the book building issue expenses were noted more than the issues recorded with the fixed price offer after regulating the issue size and other expenses. The book building issues recorded the IPOs functioning for more time period than the fixed priced issues. The smaller-size fixed priced offers experienced more underpriced than the larger-size fixed priced offers but in the book building issues, it found no difference in underpricing between the larger and smaller issue size offerings. If the book building returns have recorded positive returns, then it was said as underpriced issue and if the book building issue IPOs have recorded negative returns, then it was said as the overpriced issue.

Gupta and Samdani (2010) demonstrated that investor’s sentiment has statistically significant correlation of bookbuilding price adjustment with IPO underpricing. The investor representativeness sentiment propose to give stress on bookbuilding and fixed price IPOs. In the bookbuilding IPOs, the investors showed representative bias in the initial stage of IPOs but conservative sentiment is recorded in the long run. In the fixed price IPOs, the representativeness was greater in hot IPO cycles than in cold IPO cycle.

### 2.14 Seasoned Equity Offering

It refers to as the new equity issue by an already public traded company. It is the issue of security from an established company whose existing shares exhibited the stable price movements and substantial trading volume over time and earning a good reputation. The seasoned equity offering may include shares sold by existing shareholders and new shares or both.

Jagdeesh et al. (1993) described in study the positive relation between the seasoned equity offerings and the positive returns of the IPOs. The signaling model showed the positive results in which firms with larger IPO underpricing were more likely to issue large amount of seasoned equity offerings at more favorable prices. Ghosh (2005) documented that the underpricing created a good impression in the investor’s mind, which helps the firms to sell the
subsequent seasoned equity offerings at attractive prices. In that case, the low quality firms had more benefit of selling SEOs at high prices with the aim of earning more gains. The signaling model predicted that greatly underpriced issues were more likely to bounce back or reissue with seasoned equity offerings in the market.

2.15 Volatility of stock/uncertainty

The volatility of the stock is a measure for the fluctuations in the IPO share prices over the time. The volatility refers to as the amount of uncertainty or risk about the size of changes in a security’s value. The higher volatility means that a security’s value can potentially be spread out over a larger range of values. A lower volatility means that the security’s value does not fluctuate dramatically, but changes in value at a steady pace over a period of time.

Loughran et al. (1994) showed that IPO volume tends to be higher when stock market was higher. Daniel et al. (1998) demonstrated that IPO volatility increased with the increase in the overconfidence of the investors about the private information. The IPO return fluctuations recorded more in the private information clues than the private information of the investors. Large liquid stocks were proved to be better arbitrag ed than the smaller stocks and found the greater inefficiency in the smaller stocks than in the larger stocks. Lowry (2003) documented that IPO volume was highly fluctuating over time but it was positively related to the new companies demand for capital and the level of investor sentiment. The IPO issuing companies recorded more investors demand for capital when the market momentum was showing the rising phase. Cassia (2004) documented that the higher the market volatility recorded at the IPO low level risk, the reduced the level of initial underpricing. Firm’s risk and IPO size were positively related to price update.

Pastor and Veronesi (2005) concluded that market conditions were the most important factor in the decisions to go public for the issuing companies. When the market conditions were not good, the stock prices declined and IPO volume also declined because the private firms waited for more favorable market conditions before going public. The IPO volume was high when the shares were overvalued. Adams et al. (2008) found the favorable private information was higher in down markets than in the upmarkets and the initial returns were much higher during bull markets than in the normal or bear times. Murthy and Singh (2008) described the IPO shares return volatility just after the listing day and showed the overperformance of the IPOs. It
happened when the IPOs were bullish on the listing day and IPOs were underperformed when the IPOs recorded bearish period in the short run. The over and underperformance of the IPOs measures by the sign test. Sajter and Coric (2009) found the high correlation and co movement between the American and Croatian stock exchange in the presence of contagion and irrational escalation but found no correlation and co movement in the presence of global factors.

Ogunmuyiwa (2010) reported significant relationship in the stock market movement in prices, market capitalization and the rate of turnover in the stock market. The market turnover ratio had the significant stationary relationship with the market capitalization as GDP and with the total value of traded shares as GDP. Kumar (2010) documented that when higher market volatility recorded then the higher excess returns were recorded and found positive relation between the IPOs return and the aftermarket volatility. Gupta and Samdani (2010) showed that the higher level of volatility of market showed the higher degree of uncertainty in IPO market. Lowry et al. (2010) demonstrated higher level of volatility in the case of hot IPO market. It was consistent with the volatility of initial returns higher for firms that were more difficult to value because of high uncertainty. IPO volume appeared to be strongly positively correlated with the IPO initial return volatility. Finter and Ruenzi et al. (2011) analyzed that the more volatile stocks were found more difficult to forecast the value and difficult to arbitrage than the less volatile IPO firms stocks.

2.16 Return on investment

Return on investment refers to as the performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. The return on investment is not necessarily the same as the profit. The return on investment deals with the money invested in the company and the return is realized on that money based on the net profit of the business. This is called the return earned on the investment.

Thaler and Bondt (1985) showed the positive relationship between the excess returns and the dividend yield earned by the stock trading. Bondt and Thaler (1987) documented that the losers had positive excess returns and winners had negative excess returns. The smaller firms were having better excess returns and more growth potential than the larger sized firms. Odean (1998) demonstrated that if future expected returns for losers were greater than winners, then the
investors believed that this was the rational decision of the investors and if future expected returns for losers were not greater than winners, then the investors believed that this was the irrational behavior of the investors. If the IPOs price was risen above to the reference point then the investors were more willing to sell the stocks at gain. The reference point was referred in this case was the fundamental value.

Rocholl (2003) evidence proved that the increase in the initial return of the IPO when the demand of the shares was more than the supply of the shares and the subscription time also increases with the increase in underpricing level. Elton et al. (2004) examined the future return predictability which was easily forecasted by past performance of the stocks. The individual investors trade too much and keep the undiversified portfolios at hold for the longer positions too long to avoid the loss. It was held only if the investors were rational. Leite (2004) documented the relationship between the initial return and supply of the securities in the IPO market. If the IPOs were positively performed, then the investors demand for IPO shares was more than the supply of the IPO shares. Whereas, the initial return if recorded negative, then the demand of shares was less than the supply of the securities.

Baker and Wurgler (2006) documented the inverse relationship between return on investment and the investor sentiment. If investor sentiment was low, returns were subsequently high for small stocks or young stocks at the beginning stage. On the contrary, it is vice-versa. Lin and Hsu (2008) analyzed the inverse relationship between the trading volume and the initial returns. But the larger sized IPO offerings enjoyed much higher trading volume. Kumar (2008), (2010) documented that if the return on IPOs was noted as positive then the issue was called the underpriced and if the IPO returns were negative then the issues were overpriced. Finter and Ruenzi (2011) demonstrated the positive relation with the return of sensitive stocks low sentiment which was shown to have more returns than on the non sensitive stocks when the sentiment was recorded high.

2.17 Age of the Firm

The age of the firm is one of the most important factors for the company and defined the age in terms of the number of years. The age of the IPO firm defined the level of the maturity of the company. The age of the firm is measured as the difference between the date of incorporation and the date at which the company goes public.
Cassia et al. (2004) described in study that the age of the issuing companies were positively related with the overperformance of the IPOs. Adams et al. (2008) empirically showed the positive relation that the older firms had longer operating history and incurred less underpricing and less uncertainty. Older firms were easier to value and easier to predict the cash flows than the younger firms. It was difficult to forecast future funds of the younger firms due to the missing track records in the prospectus of SEBI. Islam et al. (2010) showed the positive relation of age of firm with the level of underpricing. The investors were more comfortable in investing with the larger or older firms due to availability of their information. Kumar (2010) documented that the younger firms have less track records based on the financial position and had more uncertainty in future events and less excess returns were recorded by the firms.

Sharma and Seraphim (2010) demonstrated the positive relationship between age of the firm and underwriters prestige. It found that higher the maturity of the firm, more likely to be managed by the more prestigious underwriters. Finter and Ruenzi et al. (2011) analyzed that young firms were more sensitive and more difficult to value. It found the significantly positive correlation with different investments, investor sentiments were sensitive to the young firms and the investors sentiment were insensitive to the old firms. Guyo et al. (2011) showed that the younger firms had shorter operating history, difficult to analyze the cash flows due to the missing track records and faced more uncertainty and more underpricing as compared to the older firms which had longer operating history and less underpriced in the market.

Conclusions

After reviewing the literature, some showed the consistent results, positive significant relationships and others showed the inconsistent results and the negatively related to each other. Some conclusion related to the past studies is mentioned below. The investor sentiment was deeply related to the stocks returns. If the returns on stock were high, then the investor sentiment was also increasing which means investors behave optimistically. When the investor sentiment was high, more companies were going public and lower level of overperformance was recorded. Whenever the investor had information about the stock, then it showed the noise trading sentiment. The noise trader sentiment was changed over time, often the investors behaved excessively pessimistic and at other times excessively optimistic. The uninformed investors who
had unfamiliar information about the IPO stock but trade with the positive optimistic behavior and the informed investors’ who had familiar information then they trade with the pessimistic reactions.

The informed investors face the situation of winner’s curse in the presence of the informed investors. The informed investors had more superior information to dominate the overperformed issues while the uninformed investors were participated in the overpriced issues. To attract the uninformed investors, the IPO firms sell shares at discount to reduce the winner’s curse. The investors hold losing investment too long and sell winning investment too soon. The investors believed that the today’s losers will soon outperform today’s winners. The males were having stronger disposition effect than the females. The investors were hold the paper gain stock until stock was increased and sell the paper gain stock only when the stock was realized the gain.

The herding behavior referred to as the investors’ behavior in which the people blindly followed the decisions of majority rather than relying on their rational thinking. It showed positive effect more on females than on males. The investors underreacted due to conservatism bias and tended to be very slow to pick up on changes because the investors had fear of losing investments. Once the investors made a wrong decision, then the investors were hesitant to start making IPO investments again. The females found less confident than the males. The males showed overoptimistic behavior while making investments but females were pessimistic and less confident. The overconfident investors aggressively bought and sold the stocks having valid information signals. The investors invested excessively when they were overconfident on their information.

The investors overreact when they had current information or private information but under react on the public information. This overreaction behavior showed that the investors made excessive purchase orders when the rumors were positive. The excessive sale orders happened when the rumors were negative until they avoid the losses. In the cold IPO cycle, the investors exhibited the conservative bias which means they under react on the information but in the hot IPO cycle, the investors showed the representativeness bias which meant the investors overreacted on the announcements. When the investors were more optimistic, more companies wanted to go public and larger the IPO demand. If the IPO market underperformed, the informed
investors withdraw from the IPO market and the uninformed investors receive the larger allocation of the IPO shares.

More issues shown more underpriced; underwriters were encouraged the companies to go public. The investors invested excessively when the market showed underpricing of IPOs. The increases in the underpricing of the IPOs showed greater level of ex-ante uncertainty and lower expected liquidity. The IPO underpricing was less for the older and larger companies and had faced less risk. When the IPOs were underpriced, the issuing companies were losing money called money left on table. The IPO market was overpriced; the firms were performing negatively because the firms were hesitant to enter into market showed inconsistent performance. For winners, long run performance was positive but for losers, the long run performance was negative. The long run negative performance happened when the investor exuberance fades. The long run performance and the underpricing found negative relationship with each other. The hot IPOs had worse long run performance than the cold IPOs.

Results were more consistent with the bookbuilding pricemethod. The bookbuilding listed IPOs were significantly less underpriced than the fixed priced IPOs. The bookbuilding IPOs faced less uncertainty. The seasoned equity offerings and the underpricing showed the positive relationship between each other. The firms with larger IPO underpricing were more interested in issuing large amount of seasoned equity offerings at the more favorable prices. The underpriced market created a good impression in the investors’ mind, which help the firms to sell seasoned equity offering shares at the attractive prices. The IPO market changed with time, when the stock volume showed hike then the stock market was also higher. The excess volatility was greater around the private signal than the public signal.

So, the investors’ overconfidence increases with the increase in positive information of the market. The large liquid stocks were better arbitraged than the smaller IPO stocks. More uncertainty was found in the younger firms. The IPO volume was high when the shares were overvalued. Volatility, risk and return had positive relationship. The more volatile stocks were difficult to value and difficult to arbitrage than the less volatile stocks. If the future expected return for losers were greater than the winners, then the investors had rational sentiment. When the investors were rational then they hold the portfolio for longer positions too long to make more returns. There was a positive relationship with return and supply of the securities in the
market. The older firms had longer operating history and face less uncertainty and less situation of low performance. The older firms were easier to value and easier to forecast the cash flows than the younger firms.

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References:


