

CHAPTER-2

REVIEW OF LITERATURE

A lot of researches on IPO performance with risk proxies are available in the literature. A critical examination of accessible material from academic papers, books, government reports, and online sources was done to better understand the theory and practise of risk disclosure in IPO prospectus and under-pricing. This study attempted to uncover various risk factors, particularly mutually exclusive risk categories, influencing IPO performance or under-pricing. This chapter provides a literature review on Market performance of IPOs. Market Performance is measured as Underpricing in short- run and overpricing in long- run. It also includes literature on Impact of Prospectus information as well as Risk factor disclosure on on IPO performance. The chapter describes the literature related to theoretical concepts and findings that helped to develop research questions, hypotheses, and research objectives. Furthermore, the methodologies used in previous studies also aided in the development of the research methodology presented in the next chapter. This review of literature espoused in identifying the gaps in the existing research.

2.1 INTRODUCTION

Every day, a number of companies decide to go public in order to raise new capital through IPOs across the world. The pricing and performance of these IPOs have been the major issue for empirical research in the field of finance. A great number of studies have been carried all over the world to assess the performance of Initial Public Offerings in both the short and long run. However, there are a lot of factors that influence the performance of an IPO. The risk factor is one of the major determinants that affect the performance of IPOs. Governments all around the globe have made it obligatory for each company intending to go public to draft a prospectus that includes pertinent information about the firm's history, financial affairs, and risk factors so that potential investors may better understand the company before investing (Beatty, 1989). The prospectus's extensive and high-quality material contributes to optimal IPO pricing and minimises price errors (Hanley & Hoberg, 2010). The impact of risk factor disclosures in prospectuses on IPO performance can be studied by dividing up the existing literature in the following manner:

2.2 LITERATURE REVIEW ON THE MARKET PERFORMANCE OF INITIAL PUBLIC OFFERINGS

A large number of studies have been carried out internationally to measure the performance of Initial Public Offerings, and the majority of the empirical literature demonstrates that IPOs are generally under-priced (positive first-day initial return) in the short run, whereas they are overpriced (under-performed) in the long-run. The terms under-pricing and first-day initial returns are interchangeably used by academicians in the finance literature (Ritter & Welch, 2002). Ule (1937) in the United States was the first to report on the phenomena of under-pricing associated with the listing of new seasoned issues. During the years 1934-1937, he observed an average under-pricing of 25.50 per cent (Evans, 1995). Reilly and Hatfield (1969) published the first study on the 53 initial public offerings (IPOs) that outperformed the US market on average between 1963 and 1965 (Hutagaol, 2005). Later on, this phenomenon was presented by Stoll and Curley (1970), Logue (1973), Ibbotson (1975) and many others. For many decades, high returns on the day of listing of stocks have been extensively documented in the literature around the world. However, the factors that influence under-pricing of IPOs and their level differ across countries for many reasons (Loughran & Ritter, 2004)

The main theories/models which explain various reasons of under-pricing have been discussed in the previous chapter. Most under-pricing theories are centred on the hypothesis of information asymmetries between the IPO market participants'. These information asymmetries may be between the issuers and their investment bankers (Baron, 1982); between investment bankers and investors as per the market feedback hypothesis (Benveniste & Spindt, 1989); information asymmetry among investors- the 'winners curse' hypothesis (Rock, 1986); and the information asymmetry between the issuers and the investors - the signaling hypothesis (Allen & Faulhaber, 1989, Welch, 1989). Other reasons include avoidance of potential legal liability (Lowry & Shu, 2002); 'faddish' behaviour of investors (Aggarwal & Rivoli, 1990), investment banker reputation (Carter & Manaster, 1990), 'information cascades' in the IPO market (Welch, 1992), and prospect theory (Loughran & Ritter, 2002, Aggarwal et al., 2002). The following is the review of some studies conducted globally by various academics utilising various factors impacting the performance of initial public offerings:

2.2.1 Various studies that show IPOs are generally under-priced

Cassia et al. (2004) have observed the initial return of 182 IPOs, listed on the main board of the Italian Stock Exchange, during the period 1985 to 2001, and have attempted to find out the determinants of IPO initial under-pricing. During this period, the mean under-pricing in Italy was 21.87%, which was less than in the US. The under-pricing in 1999 and 2000 was noticed exclusively in the sectors of technology and the Internet. Italian IPOs did not appear to be notably under-priced in 2000 and 2001, but Italian IPOs were overpriced on average in 2001. The determinants for such a changing pattern were the shift in pricing strategies, i.e., from fixed-price to book-building, which led to less under-pricing and segmentation of the Italian Stock Exchange, and the main board for technology and high-growth firms. The age of the company, the size of the offer, and the volatility of the IPO price appear to be the most important determinants. Negative information learnt during book building appears to be more fully absorbed into the offer price than positive information, according to the findings. Finally, it demonstrates that price changes can be predicted partially based on public information available at the time of the offering.

Cheng et al. (2004) evaluated the intraday attitude of IPO pricing through a sample of 159 IPOs that occurred in Hong Kong from 1995 to 1998. The sample includes 96 IPOs which were listed in the pre-Asian financial crisis period and 61 IPOs related to the post-crisis period (the Asian financial crisis started at the beginning of the year 1997). The price behaviour of the sample was analysed on a daily basis during the period of study and found that stocks were initially underpriced but this pattern disappeared after the first day of initial returns. The volatility of IPOs was measured using Parkinson methodology and it was observed that the price was initially listed at a high price but it declined sharply till the end of the day, following a double U-shape pattern, similar to that of the general market. Huge trading was noted in the first 5 minutes on the first opening day. It was also noticed that the extent of IPO under-pricing declined after the Asian financial crisis.

Aussenegg (2006) investigated 67 Austrian initial public offerings (IPOs) that were listed on the Vienna Stock Exchange between 1984 and 1996, to determine the first day returns as well as the cross-sectional distribution of these returns. He also measured the level of under-pricing in the short run and aftermarket performance in

the long run. The under-pricing for Austrian IPOs was observed to be 6.5 per cent, which is much lower than most other IPO markets in the world, while these IPOs considerably under-performed in the long run. Cross-sectional disparities in the ownership structure of Austrian IPO enterprises were discovered to be the main cause of underperformance.

Agarwal et al. (2008) analysed a sample of 256 IPOs floated in Hong Kong from 1993 to 1997 to find the association between the investors' demand for IPOs and their aftermarket performance. It was discovered that in the short term, IPOs with high investor demand were expressively under-priced, while IPOs with low investor demand were significantly overvalued, while in the long run, the relationship was reversed. These results are inconsistent with the information asymmetry hypotheses and in line with the speculative bubble theory. High demand temporarily creates a speculative bubble due to investors' over optimism about a firm's future which pushes the stock's price higher than its true value in the short-run. However, this speculative bubble eventually vanishes in the long-run.

Gleason et al. (2008) focused on identifying the characteristics that influence the level of aftermarket risk following initial public offerings. They further tried to analyse whether underwriter reputation, VC backing, and other issuer-specific and offer-specific factors affect the aftermarket risk and also evaluated the link between the aftermarket risk and IPO under-pricing. The researchers analysed this relationship through a sample of 1558 US IPOs that occurred from 1994 to 2003. Multiple regression analysis was applied to see the association between aftermarket risk and other characteristics, using time-varying market risk as a control variable. It was discovered that the risk of the stock at the time of the IPO's opening was not the same as the risk of the stock in the aftermarket, so IPOs that were highly valued on opening day had a larger risk in the aftermarket. Under-pricing is positively related to the firm's aftermarket risk in the short and long run. The firms' hiring more reputable investment bank underwriters and being backed by venture capitalists showed a greater degree of aftermarket risk. Regardless of the measure, under-pricing reflects uncertainty at the time of the offering.

Pande and Vaidyanathan (2008) evaluated the under-pricing of Indian IPOs listed on the NSE from the years 2004 to 2006. Multivariate Regression Analysis as a

statistical tool was applied to the variables like the size of the IPO issue, delay time in listing, marketing expenditure, and demand for the IPO (dummy variable). The findings of the study documented that demand for IPO and delay time in listing of IPO depicted a positive relationship with under-pricing of IPO. The results observed negative post-IPO performance after one month of listing of companies.

Islam et al. (2010) analysed a sample of 191 IPOs issued within the years 1995 to 2005 to find out the degree of under-pricing of IPOs, listed on the Chittagong Stock Exchange, Bangladesh. The researchers observed in their study that under-pricing within the mentioned period was 480.72%, with a standard deviation of 1217.25. While comparing the level of under-pricing with other Asian and advanced stock markets, it is found that in the Bangladesh stock market it is comparatively much higher. Regression analysis shows that the age of the company and its size are favourably associated, whilst the type of industry and the issue size are adversely related. However, the timing of the offer had no significant impact on the extent of under-pricing of IPOs. They have suggested that in order to lower the level of under-pricing, the use of the book building pricing method should be enhanced.

Kipngetich et al, (2011) analysed a sample of IPOs floated during 1994 to 2008 in Kenya to find out the determinants of IPO pricing. They looked into how investor mood, post-IPO ownership holding, firm's size, board prestige, and the firm's age influence IPO pricing. Using regression equations and descriptive statistics, they discovered that IPOs were 49.44 per cent under-priced during this time period. No significant relationship was observed between the information disclosed in the prospectus and IPO pricing, and it was also noticed that rational theory did not depict any effect of investors' sentiment in the Kenyan IPO market. Here it was assumed that investors' sentiment and the prestige of the board are adversely associated with the IPO issue price.

Agathee et al. (2012) investigated a sample consisting of 44 Mauritian IPOs, listed on the Stock Exchange of Mauritius (SEM) from 1989 to 2010. It was found that under-pricing in Mauritius averagely ranged between 10–20%. It was determined using a regression equation based on the first day, first week, and first month returns, but the investors got an average first day return of 13.14 per cent. The typical initial abnormal return turns negative by the fourth day of trading, according to the findings of the

study. The study also showed that aftermarket risk and auditor reputation had a strong favourable effect on initial returns, but ex-ante financial soundness had a negative impact on short-run under-pricing. Firms with a greater aftermarket risk level, weaker financial strength, and reputable auditors had a larger degree of under-pricing on average. Other logical criteria such as return on assets, offer size, age, and earnings per share, seasoned equity offerings, underwriter repute, and the extent of under-pricing, however, did not show a meaningful relationship.

Heerden & Alagidede (2012) examined the under-pricing of 138 South African IPOs floated from 2006 to 2010 on the Johannesburg Stock Exchange. The performance of IPOs was measured in both the short and long run using the adjusted market and market relative model. The maximum return was recorded on the 15th day of trading, followed by returns on the 20th, 10th, 1st, and 5th days, respectively. However, in 2008 and 2009, the initial day return was observed highest. In 2007, due to the effect of speculative bubble, the financial sector moved towards the highest return though in 2009 and 2010 it turned into negative returns. In spite of financial crises, the price of IPOs was increased in 2008 though their total proceeds collection was decreased. It signifies that in this crucial period, the main motive of investment bankers was to protect their reputation thus they underwrote only well-known and established firms and investors also preferred to invest in such firms.

Mishra (2012) studied the effect of the pricing mechanism on the performance of IPOs. The study evaluated the 235 Indian IPOs that occurred between 1997 and 2008, issued either on a fixed pricing mechanism or a book building mechanism. In this period, 48 IPOs were issued with a fixed price mechanism, whereas 187 were issued with a book building mechanism. On average, most of the IPOs were overpriced from 1998 to 2002. But from 2003 to 2007, the IPOs experienced under-pricing. As a result, the study came to the conclusion that changing the pricing mechanism from fixed to book building had no substantial impact on the performance of IPOs or the efficiency of the Indian primary market.

Alvarez (2015) investigated 80 Spanish IPOs, issued via the book-building method, from 1993 to 2011 to determine the effect of the initial return volatility of IPOs on the assessment of parent companies. The publicity of IPOs begins before the launching of

IPOs and continues till the complete process is completed; consequently, it spreads more information to potential investors, leading to a lower degree of uncertainty and lower under-pricing in general. The study is based on the Maximum Likelihood Estimation method, which predicts the impact of each issue-specific characteristic on initial return volatility and the valuation of the firm also. A strong association was noticed among the offer characteristics which also affect average under-pricing and its volatility. This study confirms the effect of information asymmetry and the hot IPO market hypotheses on the under-pricing but did not support the signaling hypothesis.

Beaulieu & Mrissa Bouden, (2015) investigated 1001 IPOs issued in the US stock market during 2000 to 2009, to analyse the relationship between firm-specific risk and IPO market cycles. The researchers evaluated systematic and idiosyncratic risk factors on monthly basis in this study. For each IPO, Daily initial returns of IPO, Daily Equally Weighted and Daily Value Weighted average was measured on monthly basis. Initial IPO return and Number of IPOs were used as proxy of IPO cycles. A positive association between monthly initial return and numbers of IPOs was observed for high risk IPOs. The same trend was observed among risky firms also during hot-issue period. The firm specific risk disclosed in IPO prospectus influenced the investment decision of investors and their perception was reflected in market volatility and IPO under-pricing.

Alanazi et al. (2016) analysed 76 IPO prospectuses to find the level of under-pricing in the supply and demand structure in Saudi Arabia during the hot market period from 2003 to 2010, when there was a boom in oil markets resulting in huge investment in the Gulf region. The conversion of the pricing mechanism from the fix-priced to the book-built method also resulted in more price efficiency in 2011. During this period, Saudi Arabia demonstrated a 253% under-pricing on its shares. With the opening of IPOs, the fixed supply of shares develops a vertical and perfectly inelastic supply curve. The prices are determined by supply and demand efficacy on the initial day. The result shows that both the supply and demand curves significantly slope negatively, while the supply curve remains above the demand curve but much steeper than the demand curve. This is due to the fact that the flippers exit the market and supply decreases sharply while new entrants maintain the decreasing demand. It

shows that under-pricing is essentially tied to supply and demand, but the focus is on how the under-pricing issue is controlled and administered in a certain market.

Yaakob & Halim (2016) investigated the degrees of initial under-pricing of mainstream Malaysian IPOs. They studied a sample of 46 IPOs taken from all types of industries that occurred from 2012 to 2015 and found that, like earlier Malaysian studies; the IPOs were significantly under-priced during this period. This high under-pricing does not indicate the poor performance of IPO firms. The under-pricing was estimated by taking the issue's size, issue's price, and types of industry as independent variables.

Chhabra et al. (2017) examined 300 Indian IPOs, listed on the NSE from 2005 to 2012, issued through the book-building pricing mechanism. The study time period from 2005 to 2008 was considered a pre-recession, whereas the period from 2009 to 2012 was acknowledged as a period of post-recession. Maple software was devised to optimise the listing day return, calculated using Market Adjusted Excess Return. A linear regression model was applied to determine the short-run market performance. The internal variables used in the current study are firm age, stake of promoters, firm size, and issue size, whereas IPO grading and timing of offering were taken as external variables. The study found that financially sound firms having superior performance tend to raise funds from the market with more ease in comparison to weak financial firms. The results ascertain that IPOs deliver excess returns to investors in the short run.

Sahoo (2017) conducted an empirical examination of 135 IPOs launched from 2009 to 2014 in the Indian market via the book building technique. Anchor investment in IPOs has been found to lower short-term volatility and boost aftermarket liquidity. It was suggested that anchors help retail investors protect their money from low-quality IPOs, and the adoption of anchor investment in India proved to be an extra quality certification.

Torbira & Oki (2017) used a sample of 341 IPOs from the pre-financial-crisis and post-financial crisis periods to investigate the factors that influence IPO under-pricing in the UK. Under-pricing was noted highest in 2004, measuring 145% with the highest number of issues, but it was 62% for the entire study period. The long-run

performance of IPOs was evaluated through the Buy-and-Hold Abnormal Returns method. The ordinary least squares regression technique was used for calculating under-pricing using various independent variables such as issue size, age of the issuing firm, total gross proceeds, and pre-issue market capitalization of the firm with a number of dummy variables such as the high-tech industry, principal exchange of trade, underwriter reputation, VC backing, method of issuance, interest rate level, gross domestic product, 30-day delayed equivalent market return, and calendar year of issue. IPOs issued in the post-financial crisis period were less under-priced but at a lower rate than the pre-crisis issues. No significant impact of any variable on under-pricing was noticed in the long run.

2.2.2 Differences in the level of under-pricing amongst different nations for various reasons

Under-pricing of IPOs in the short term has been documented for various periods and at various times throughout the world, from mature stock markets in the United States to emerging stock markets in Asia and Africa (Boon, 2014), and its magnitude varies in different nations for various reasons. Under-pricing has been a continuous empirical issue for decades, with extensive global research proving its prevalence (Loughran et al., 2020).

Engelen & Essen (2010) quoted that IPOs are under-priced with different degrees around the world having different institutional and legal frameworks from country to country. Applying the hierarchical linear modelling approach, the researchers have analysed 2920 IPOs to know the relationship between the extent of under-pricing and country-level institutional characteristics at country level. The study's sample spans 21 nations (Argentina, Austria, Australia, Belgium, Brazil, Finland, France, Germany, Greece, Israel, Italy, Japan, Mexico, New Zealand, The Netherlands, Portugal, Spain, Sweden, Switzerland, the UK, and the US) where IPOs occurred during 2000-2005. It was found that IPOs in countries with less legal protection are more under-priced, whereas those in countries with a more stringent legal framework are less under-priced. Furthermore, it was discovered that the level of under-pricing of IPOs varies by 10% across countries. Under-pricing was highest in Japan and Spain, measuring more than 40 per cent, whereas in Mexico it was a minimum, showing less than 2.25 per cent, and at the same time, it was noticed in Israel.

Banerjee et al. (2011) conducted an empirical study to determine the causes and sources of IPO underpricing across countries. A sample of 8776 international IPOs across 36 countries issued between 2000 and 2006 was observed. Spain has the largest estimate of analysts, while Israel has the smallest. The United States had the lowest home country bias, while the Philippines had the greatest. The anti-self-dealing index was noticed to be highest in Singapore and lowest in the Netherlands. Overall, IPO underpricing was found to be greater in countries having higher degrees of information asymmetry and less effective contract enforcement mechanisms.

Semenenko (2012) examined the effect of existing IPO rules on the performance of IPOs listed on the NYSE, AMEX, and NASDAQ stock exchanges in the United States. The study was confined to a time span of 22 years from 1984 to 2005. The study observed that the firms that will be listed in the current period have to face more stiff regulations as compared to the earlier listed firms. The findings of the study documented that changes as well as amendments in the listing rules of various stock exchanges have a little weight on the performance and liquidity measures of IPO firms. The results further suggested that while measuring the level of risk, more weightage should be given to qualitative issues in comparison to quantitative measures in listing firms.

Chaitas (2013) analysed the level of under-pricing in the short-run of IPOs that occurred in Eastern Europe. A sample of 209 IPO firms which issued their IPOs after 2007 were investigated by observing day-to-day stock prices for a time span of 6 to 30 months. The study categorised the firms into three main groups: (i) on the basis of the location of the countries, namely Turkey, Poland, Russia, and other countries of Eastern Europe; (ii) according to industry, i.e., the Financial-Banking, Manufacturing, Technological, Retail, and Pharmaceutical sectors; and (iii) IPO issuing period, i.e., before and after the financial crisis. The methodology and the tests applied in the study are: CAR, BHAR, t-test, ANOVA, and descriptive statistics. It was observed that the majority of IPOs in Eastern Europe were under-priced six to eighteen months after their occurrence, and that the nations of Eastern Europe had considerable volatility. Different rates of abnormal returns were discovered among the investigated nations over a period of six to twenty-four months following the IPO's issuance, and this pattern remained the same in the pre and post financial crisis eras.

2.2.3 Listing on Main Board V/S Second Board

Further, in the following studies, it is observed that the stocks enlisted on the SME/second board are under-priced more than the stocks enlisted on the main board:

Yong & Isa (2003) analysed a sample of 179 new issues, comprising of 44 public issues, 95 offers for sale and 40 hybrid public issues, listed on the Kuala Lumpur Stock Exchange of Malaysia (Main Board and the Second Board) from 1990 to 1998. The overall average initial return for the study period was found to be 94.91% while the average over-subscription ratio remained at 43.71 times. Upon comparing the initial returns of different types of new issues listed on both the boards, it was found that IPOs listed on the main board were averagely under-priced by 78.16%, those offered for sale by 82.71% and hybrids by 75.73%. However, on the second board, the mean initial return was 139.74% and for the offer for sale it was 99.79%, whereas for the hybrid it was 102.87%. The average overall return for the Second Board's listed IPOs was 104.22% for the entire study period, which was 30% higher than the average initial return generated by IPOs listed on the Main Board. Furthermore, the average over-subscription ratio on the SME was 76% higher than the stated ratio on the Main Board, and step-wise regression results showed that only the over-subscription ratio contributed significantly to the initial returns on average.

Jeribi et al. (2014) assumed that overall under-pricing is composition of both voluntary as well as involuntary pricing. For this study, a sample of 33 Tunisian IPOs from 1994 to 2012 was examined. OLS regression was used to establish the association between IPO returns and the purposeful price discount, investor demand, and underwriter reputation. It was discovered that IPOs on Tunisian SME are more under-priced compared to IPOs on the Main Board and the entire market. Underwriter reputation plays significant and positive role in voluntary and involuntary under-pricing. The firms who underwrite their issue with high reputed underwriters suffer from little more involuntary wealth loss. The findings contradict information asymmetry (Baron, 1982), the winners' curse model (Rock, 1986), and signaling theory, but they are in line with the shifting goal function model (Loughran and Ritter, 2004) and informational cascades (Welch, 1992). The high degree of initial returns is supported by the underwriter price support hypothesis.

Zou et al. (2019) analysed the initial returns of 755 Chinese IPOs enlisted on the SME board between 2006 and 2016 to investigate whether the under-pricing is designedly created or is due to aftermarket mis-valuation. Simultaneously, the effect of periodical changes in IPO policy and trading methods on under-pricing was also analysed. The Stochastic frontier approach was applied to decide the fair price of the IPO as well as to segregate the constituents of presumptive under-pricing and mis-valuation factors. The OLS regression equation was used to see the connection between initial returns and planned under-pricing, as well as other factors. The main cause of under-pricing was found to be the irrational behaviour of investors and an imperfect mechanism for the issue of shares, rather than intentionally created under-pricing. Moreover, different degrees of under-pricing were noticed differentially in the hot and cold periods due to varying characteristics of pricing.

2.2.4 Market performance of IPOs in long run

Sahoo & Rajib (2010) examined the performance of IPOs in the Indian market with the goal of evaluating price performance over a three-year period from the IPO's listing date as the long-term post-issue price performance of IPOs. The data were collected from 92 IPOs, and the long run pricing performance was evaluated using wealth relatives and Buy-and-Hold Market-adjusted Return. The study found that investors' unrealistic expectations led to a high initial day return, whereas the BHAR approach showed that investors who buy at offer get good returns over time, whereas intraday traders must wait more than a year to earn a positive return. According to the findings, some characteristics such as pre-IPO firm age, post-IPO promoter holdings, and price to book value are ineffective criteria for judging long- and short-term performance, and that instead, offer size, timing, and leverage should be carefully considered.

Carter et al. (2011) analysed the long-run performance of 6686 IPOs occurred during 1981 to 2005 in the US. The impact of stock liquidity, return momentum, skewness in returns, and investment as significant risk factors on IPO pricing was investigated. On a risk-adjusted basis, it was discovered that IPOs do not underperform in the aftermarket. Liquidity, investment, and momentum were also found to be significant predictors of IPO initial returns, but skewness was not. Negative momentum and higher liquidity lead to lower expected returns, whereas the investment component

has substantial explanatory power for IPO outcomes. The study suggested that three factor Fama-French regression was shown to be sufficient for explaining the underperformance of IPOs in the long-run.

Otchere et al. (2013) looked at the extent of under-pricing and the stock market performance of financial exchange IPO's around the globe in the long run. Sample data was gathered from 20 stock exchanges around the world (Australia, Spain, Brazil, the United States, Malaysia, China, Germany, New Zealand, the United Kingdom, the Philippines, Japan, Singapore, and Canada), as well as a control sample of 339 size-matched non-stock exchange listed financial and non-financial firms from the same countries for the same particular period, i.e. IPOs occurred between 1998 and 2000. To arrive at the conclusion, the methods of CAR and BHAR, as well as descriptive statistics and regression analysis, were used. The findings show that IPO stocks are undervalued, yet that they outperform the stock market indices. The results also reveal that IPOs listed on stock exchanges are considerably under-priced and outperform ordinary IPOs over time. Because the stock exchanges have an incentive to under-price their offerings considerably, It also suggests that long-term returns on financial exchanges are more closely linked to signaling theory.

Perera (2014) looked into the industry and year-wise performance of 254 initial public offerings (IPOs) enlisted on the Australian Stock Exchange from 2006 to 2011 to see if there are any IPOs that are underpriced in the short run but overpriced in the long run. This study looked at first-day returns in the primary, secondary, and total markets, as well as post-day listing returns, to assess short-term market performance. On the basis of market-adjusted abnormal return, IPOs were determined to be underpriced by 25.47 percent in the primary market and 23.11 percent in the whole market. In the secondary market, they were overcharged by 1.55 percent. According to post-listing returns, Australian IPOs were underpriced based on the average cumulative abnormal return (CAR). The IPO period, time to listing, LISDs, total net proceeds ratio, issue price, attached share option, and market volatility were identified as the primary predictors of short-run performance. Using an event-time methodology, long-run market performance was examined under equally weighted and value-weighted schemes up to three post-listing years, and it was discovered that IPOs were overvalued. Logistics, probit, and multiple regression models were used to

identify the factors of long-term market success. These determinants varied according to the developed econometric models in primary, secondary, total or post-day in short run as well as long run.

Berk & Peterle (2015) empirically investigated IPOs' initial day and long-run returns in Central and Eastern Europe and compared the results thereof with returns of EU IPOs. 172 initial public offerings (IPOs) enlisted between 2000 and 2009 on the stock exchanges of Austria, Bulgaria, the Czech Republic, Poland, Romania, and Slovenia were comprehensively examined, using both index-adjusted and CAPM-adjusted returns metrics. Significant positive initial market adjusted returns were observed in the CEE region, which were higher than returns found in the EU. However, smaller IPOs were more under-priced in the CEE region, but this trend was not found in the EU. In the long-run, IPOs underperformed in CEE.

Hawaldar et al. (2018) examined 464 Indian IPOs listed from 2001 to 2011 on the Bombay Stock Exchange. 365 IPOs opted for the book building mechanism, whereas the fixed price mechanism was followed by 95 IPOs. The study also analysed the initial pricing and long-term post-listing performance of IPOs from 2011 to 2015. The results documented that the companies with book building pricing mechanisms were less inclined towards under-pricing on listing day as compared to fixed pricing mechanism firms. However, the same trend was not observed in the longer run. The companies which followed the book building pricing mechanism delivered negative post-listing returns, computed from the closing price on the listing day, in the short, medium and long run. The long-term performance (three year period and five year period) of companies with a fixed price mechanism was noticed to be positive.

2.3 LITERATURE REVIEW ON IMPACT OF PROSPECTUS INFORMATION ON IPO PERFORMANCE

Bhabra & Pettway (2003) examined the relevance of the IPO prospectus to investors and also evaluated the key role of information in the short-run as well as long-run performance of stocks. They studied 242 Canadian IPOs that were launched from 1987 to 1991. The Match-firm technique was devised to compute post-IPO Buy and Hold abnormal returns. One-year abnormal return and three-year abnormal return were used as dependent variables, whereas firm-specific variables like size of firm,

age of firm, spending on research and development activities, asset tangibility, and profitability were used as independent variables. The result suggests that IPO prospectus information may have a noticeable influence on the short-run performance of an IPO but does not have any significant effect on the long-run performance. The effect of the information disclosed in the IPO prospectus diminishes gradually.

Cazavan-Jeny & Jeanjean (2007) investigated the causes and effects of various degrees of information forecast disclosure in prospectuses through a sample consisting of 82 IPOs listed on the Euronext Paris market from 2000 to 2002. Five hypotheses are created with regard to the following potential factors in the level of information in forecast disclosures for IPOs: forecast horizon, business age, auditors' reputation, amount of capital increase, and proportion of shares held by the owners. As for the IPO market, industry sector, firm size, and year of IPO are taken as control variables. The hypotheses were tested using a logit regression. Only two factors, company age and forecast horizon, were shown to be positively related to extremely comprehensive forecast disclosures, while forecast error was shown to be negatively related to the degree of information in forecast disclosures in the study. It implies that the obligatory publication of extremely detailed projections will increase market efficiency by lowering forecast inaccuracy.

Chahine & Filatotchev (2008) analysed the information contained in French IPO prospectuses to determine if voluntary disclosure might boost the stock market performance of the IPO firms. The researchers attempted to establish a relationship between the signaling functions of information disclosure and its governance parameters. They examined a sample of 140 IPOs issued in France between 1996 and 2000, expanding the scope of IPO research beyond the United States and the United Kingdom and contributing to a more global understanding of IPO agency issues. The study acknowledged a substantial nonlinear relationship between voluntary disclosure and under-pricing, as well as a favourable influence of board independence on the IPO offer price. Although strategic information disclosure and board independence reduce agency difficulties between the investors and IPO issuers, resulting in a lower IPO discount, comprehensive disclosure may harm the firm's competitive edge and result in a curvilinear relationship. Under-pricing is caused by the kind of information rather than the quantity of information, which increases with the level of disclosure.

Hanley & Hoberg (2008) analysed US-based 2043 IPO prospectuses and amendments therein between January 1st, 1996 and October 31st, 2005. The IPO prospectuses are designed strategically into four sections: Summary, Risk Factors, Use of Proceeds and Management's Discussion and Analysis (MD&A). Regression analysis was used as a statistical technique to predict the relationship between IPO pricing and the subsequent aftermarket. The results assessed that the detailed section about the summary of the IPO prospectus and use of proceeds minimises the asymmetric information, which enhances the efficiency of IPO prices. The information disclosed in the MD&A section has no bearing on the IPO pricing. The disclosure of risk factors depicted a positive impact on the change in offer price during book building and IPO return. The results of the study provided new insights into the classical theory of IPO pricing by disclosing the applications of favourable information for strategic purposes as well as the use of unfavourable information as a lawsuit risk hedge.

Kothari et al. (2009) not only analysed the effects of favourable and unfavourable disclosures on cost of capital but also examined a directional relation between disclosure content and cost of capital, return volatility and analyst forecast dispersion. They also deliberated the implications of disclosures by managers, financial analysts, and the media for firms' information environment. The cost of capital was estimated using the Fama-French three-factor model. A sample of 889 US firms over the time period 1996–2001 was studied through content analysis of more than 100,000 disclosure reports. They find that when there are favourable disclosures, the firm's risk, as measured by the cost of capital, stock return volatility, and analyst forecast dispersion, will decline. While unfavourable disclosures are accompanied by significant increases in risk measures. Evidence of the effect of disclosures separated by source—management, analysts, and news stories in the business press documented that negative disclosures increase the cost of capital and return volatility, whereas positive disclosures decrease the cost of capital and return volatility. Hence, the study suggests that textual disclosures affect firms' risk and information environment.

Arnold et al. (2010) analysed 1398 IPOs in the United States issued between 1998 and 2005 to determine whether the soft or ambiguous information contained in the

prospectus affects IPO pricing and subsequent returns. While formulating investment decisions, investors depend on prospectus material, which is largely ambiguous and subject to different interpretations. Investors would anticipate a premium from businesses that expose them to poorer quality or more ambiguous information; thus, initial returns are likely to rise with ambiguity. The soft information on risk had a strong association with both the initial and ex-post measures of returns, according to the study. Firms that show more uncertainty in their offering prospectuses have a larger initial under-pricing of their initial public offering. The study devised proxies for the prospectus's relative quantity of ambiguous information. The empirical findings are consistent with the ambiguity models, which allow investors to modify the needed premium and make a sound portfolio selection.

Nam et al. (2011) examined the impact of information exposure on firm performance. The study analysed 182 IPOs of the US firms which went public during 2001 to 2003. The study investigated the relationship between different types of information such as specificity, information accuracy, the time taken for information to spread, and the IPO firm's value. Three dependent variables, namely under-pricing, per cent premium/offer price, and cumulative average adjusted returns, are used to measure IPO performance. While the absolute amount of information, firm age, total assets, number of employees, risk factors, founder effects, reputation of underwriters, and venture-backing were taken as control variables. Information disclosures were found to have a negative relationship with under-pricing but a positive correlation with the per cent premium. In terms of the degree of information disclosure and firm performance, the study revealed no indication of an inverted-U shape.

Loughran & McDonald (2013) attempted to study the impact of uncertain text and tone of language in S-1 filings on the initial returns, issue price revisions, and succeeding volatility for 1,887 IPOs that occurred between 1997 and 2010 in the U.S. More ambiguous language and negative word occurrences were shown to result in higher initial returns and more volatility in the aftermarket. It was found that more uncertain text and negative word frequencies led to higher first-day returns and larger aftermarket volatility. It also tends to upward offer price revisions, while differences in tone between the S-1 and 424 filings have no influence on the offer price. The

research also backs up theoretical uncertainty models, book-building, and prospect theory with empirical data.

Shi et al. (2013) used mandated information disclosures in IPO prospectuses to explore the impact of cross-country variations on IPO under-pricing. The study comprised of 6025 IPOs, issued in different 34 countries floated during 1995 to 2002. The influence of information disclosures on IPO pricing was measured using OLS regression equation. The results found significant role of mandatory information disclosures in mitigating information asymmetries in IPOs. The study further observed a negative association between mandatory information disclosures and under-pricing. It is also examined that more extensive information disclosures lead to lower IPO under-pricing.

Bottazzi (2015) investigated whether the mandated voluntary revelation is linked to lower IPO under-pricing in Australian mining companies. He used textual analysis to examine the prospectuses of IPO mining firms enlisted on the Australian Stock Exchange from 2003 to 2012. In order to know the relationship, the regression equation was formulated using independent variables that fall into four categories: firm specific factors (age, company size, and uncertainty); issue-specific factors (issue size, retained ownership, cost of offer, underwriters, listing delay, and options), market specific factors (hot and market sentiment) and industry factors (license, expiring license, geo fees, geo board, native title, extension of exploration tenements, extension of mining tenements, and productive status). Mining companies accounted for nearly half of all ASX listed companies in Australia during the study period, which involved huge investment, and such companies are obliged to disclose under the new Joint Ore Reserves Committee Code w.e.f. 2013. According to research, companies with a more ambiguous tone in their independent geologist's report had a greater initial return. When mining firms have a geologist on their board of directors, who is most likely responsible for certifying their operations, or when they are in the production phase, this influence is reduced. As a result, under-pricing is influenced by the quality of voluntary disclosure and the characteristics of mining companies.

Fishe et al. (2015) identified a relationship between a comprehensive list of sentiment words used in disclosing textual information in IPO and under-pricing of IPO. The

study evaluated 1391 IPOs prospectuses issued from 1998 to 2005. Two sets of words were identified. One set of words was associated with high under-pricing trend and other set of words related to the low under-pricing trend. After scrutinize the list of words, the researchers identified 1,369,849 words out of which 16,352 were unique words. The study developed a new methodology to identify the relationship between risk factors specific words used in IPO prospectus and under-pricing of IPO. It also observed the effect of parts of speech on the sentiments of investors. The results found a significant influence of nouns as compared to other parts of speech on the IPO performance.

Brau et al. (2016) used content analysis of 2,298 U.S. IPO registration documents filed from 1996 to 2008 to determine the influence of soft information on IPO pricing efficiency. The strategic tone of the IPO document was shown to be favourably correlated with the initial return but adversely correlated with the stock's long-term return. IPO prospectuses containing higher positive strategic word occurrences and/or lower negative strategic word frequencies have a statistically considerable higher initial return. They introduced a survey-based library development process and a word-weighting methodology, as well as novel content-analysis libraries for key strategic words.

Crain et al. (2017) inquired about the effect of information disclosed in the prospectus on the IPO price determined during the book-building process. They investigated 2,336 IPOs listed on the US stock exchange from 1996 to 2013. In this study, firm growth opportunities were considered as a proxy for share price uncertainty. The results showed a positive relationship between the prospectus information and the volatility of the share price. High uncertainty about the share price of a firm enhances the dependency upon the book building process for establishing a conservative price range for the IPO. The IPO offer price and the degree of under-pricing were shown to have a significant association in the study.

Mohd-Rashid et al. (2018) tested the effect of the exposure of information in an IPO prospectus on the offer price. The study analysed 374 IPOs enlisted on the Malaysian Stock Exchange from 2000 to 2014. The pricing of IPOs was based on a fixed price mechanism. The offer price of the IPO was taken as a dependent variable, whereas

Shariah compliant status, institutional investors' involvement, underwriter rank, and shareholder retention were considered as independent variables in this study. Furthermore, the offer for sale, firm size, and RSHARIAH were categorised as control variables. Quantile regression and quadratic models were applied to observe the relationship between offer price and risk disclosure. The study found that the offer price remains constant irrespective of the nature of the companies, be it Shariah or non-Shariah. Any discount offered on the offer price of the IPO signifies the inferior quality or uncertainty of the listing of the IPO. The result of the study suggests that the reputation of the underwriter is inversely proportional to the offer price. A lower offer price leads to high market demand, which further enhances the probability of high initial under-pricing of the IPO.

2.4 LITERATURE REVIEW ON THE IMPACT OF RISK FACTOR DISCLOSURE ON IPO PERFORMANCE

Leone et al. (2005) studied the impact of disclosure firms' intentions in the IPO prospectus regarding the use of proceeds on the initial under-pricing of the IPO. They analysed 787 firm-commitment IPOs floated by domestic and commercial firms between January 1993 and December 1994. Use of proceeds pertains to an internal risk factor. The disclosure of specific uses of collected funds increases the precision in the minds of uninformed investors regarding security valuation. They classified the use of proceeds into seven areas, including debt repayment, payment to old shareholders, investment, marketing, working capital, R&D, and others. They used other risk factors (less proceeds RF) as control variables along with other control variables like issue size, firm age, book-to-market, advance technology, exchange listing, ownership, pre-IPO price, underwriter reputation, venture capital backing, auditor size, and insider selling. The study reveals that POs that disclose a larger percentage of proceeds for any single use have lower first-day returns, but IPOs that disclose such information generically have better initial returns. Moreover, the utilisation of funds for debt repayment and investment is strongly connected to under-pricing. Hence, it can be said that particular information revealed prior to the IPO resulted in reduced uncertainty, i.e., reduced risk factors.

Abdou & Dicle (2007) investigated the effect of mandatory risk disclosures on initial public offering (IPO) pricing. The study covered the US-based companies for five years, from 1996 to 2000. The researchers categorised thirty-two risk factors into six categories, such as managerial issues, issues related to international trade, technological concerns, operational and financial issues, market related issues, economic as well as regulatory issues. The study examined 1692 IPOs, including 1390 high-tech and 302 retail firms, to assess whether or not the firms disclosed the aforementioned risk indicators in their prospectuses. Under-pricing on listing day, under-pricing after the first week, under-pricing after the second week, after the third week, and under-pricing after the fourth week was taken as dependent variables. Control variables included hi-tech dummy variables, the log of amount filed, and the percentage change in the NASDAQ Composite Index for the same holding time of the stock. To assess the relationship between the variables, regression analysis was used as a statistical method. The findings demonstrated that risk variables have a substantial impact on IPO pricing. The similar effect of risk variables on IPO valuation has been noticed in both hi-tech companies as well as retail companies. The results of the study observed a positive relationship between risk factors disclosed in the IPO prospectus and the reputations of investment bankers, venture capitalists, and strategic location of firms.

Deumes (2008) attempted a content analysis of risk factor sections in different 90 prospectuses issued by Dutch firms raising capital in late 1990 to examine the extent to which comprehensive risk measures inferred from information affect future fluctuations of stock prices. Researchers classified the sources of risk into four categories. When the reported risk factors were aggregated by category, it was discovered that the most commonly revealed risk factors were related to the industry environment and the firm's internal environment (both 29%), following the macro environmental factors (22%) and the other risk categories (20 per cent in total). The study predicted the future total return risk, future systematic risk and the possibility of significant stock price drops in the 30-month period following the publication of the prospectus. Regression analysis was applied with the following control variables: firm size, industry type, offering type, cross-listing at a foreign exchange, and language of the prospectus. The findings revealed that prospectuses of Dutch firms contained adequate risk-relevant information for prospective investors. It also

showed that the information disclosed in the risk factor sections appears to be more meaningful than past total return risk and past systematic risk. Furthermore, it was discovered that the prices of IPOs on the Amsterdam Stock Exchange plummeted dramatically within two to three years after the IPO issue.

Hill & Short (2009) conducted content analysis of the risk disclosures of 420 IPO companies listed in the UK during the period from 1991 to 2003. They observed that, comparatively, IPO companies exhibit future planning information in a large amount and information on internal control systems and risk management in less proportion than the listed companies. Furthermore, they revealed that IPO companies put more emphasis on external risks, while listed companies remained more centred on internal risk factors. Risk disclosures were focused on downside risks rather than positive disclosure, and the extent of risk disclosure was enhanced across time. Risk warning disclosure lessens the asymmetry of information between the issuer and the investor, which leads to less under-pricing.

Spindler (2009) designed a unique information metric of IPO prospectus word-counts, counting the number of words in the total prospectus, summary section, and risk factor section. As the risk factor section contains warnings about the inherent risks at issue, this disclosure is counted as negative, whereas other sections are counted as positive disclosure. This metric of information coded from 628 IPO offerings from 1997 to 2005 in the US, showed a significant correlation with IPO under-pricing, which is as per the winner's curse theory. Such disclosures vary due to inter-industry differences and litigation risk costs. A negative relationship was noticed between disclosure and the standard deviation of subsequent returns. The firms which are in heavy risk zones disclose less positive but more negative risk information due to the fear of lawsuits, which results in under-pricing of IPOs.

Santhapparaj & Murugesu (2010) used a sample of 210 companies listed on the Bursa Malaysia to investigate the impact of risk disclosure in the prospectus on the first day returns of IPOs in Malaysia. Certain firm-specific as well as IPO-specific characteristics (risk proxies) were taken as risk variables which disclose the total risk or the risk associated with the execution of the firm's strategy. The research looked at both overall risk factors as well as each risk factor separately (internal, external, and

investment risk factors). The offer price and initial market returns were found to represent risk information disclosed in the prospectus.

Balakrishnan & Bartov (2011) investigated whether financial experts use qualitative earnings information exhibited in the risk factor section of the offering prospectus while making earnings forecasts. The study performed a content analysis of the risk factor portion of 1242 IPO offer documents issued from 1997 to 2005 and found that the IPO prospectus's risk factors section generally provides negative earnings information, while other qualitative disclosures contain both positive and negative information. The qualitative downside earnings risk information is significantly negatively correlated with both short-term and long-term earnings performance. It was also found that qualitative downside earnings risk information is not correlated with analyst earnings forecasts but is significantly negatively correlated with analyst earnings forecast errors. This earnings forecast error varies with analyst experience. Finally, it can be said that market players do not fully include the qualitative earnings risk data into stock pricing, so it partially explains the well-documented IPO stock price underperformance.

Bozzolan & Ipino (2011) attempted to examine the relationship between underpricing and the quality of forward looking information disclosure in IPO prospectuses. Through content analysis and coding as per regression equation requirements, 85 prospectuses for IPOs that occurred between 1995 and 2005 in Italy were examined. According to the findings, businesses that provide more qualitative information about their sector in the form of trends and legislation, strategies, potential R&D efforts, plans for new products, and so on, experience less under-pricing on average. More voluntary disclosure with a controlled mechanism leads to a lower level of underpricing. Moreover, narrative forward-looking information disclosure is negatively associated with under-pricing as well as the exactitude of the disclosure of forward-looking statements about earnings components reduces under-pricing.

Huang et al. (2011) empirically analysed the 154 IPO prospectuses from 13 industries issued during 2004 to 2011 to determine the IPO under-pricing in China from a risk factors disclosure perspective. Multiple regression analysis was used to see the extent of under-pricing resulting due to risk factor disclosure. The risk

categories included in a prospectus, the percentage of the risk factors section to the remainder of the prospectus, and the length of the risk factors description were all regressed as independent variables. The study concluded that the percentage of the risk factors section to the remainder of the prospectus plays a significant role in influencing IPO under-pricing and, at the same time, a third variable is negatively related to it. When looking at risk factor disclosure by industry classification, it was discovered that banking and financial sector businesses had a greater level of risk factor disclosure than conventional industry firms such as electricity, water supply, and mining. Under-pricing was found to be greatest in cultural industry businesses, up to 330 per cent. It can be said that risk disclosure will improve not only the quality of disclosure, but also the efficiency of IPO market pricing.

Karvet & Muslu (2013) examined a sample of 28,11 observations from 4,315 distinct annual reports of firms filed with the SEC during 1994 to 2007 to know whether informative textual risk disclosure can change the risk perception of users' regarding estimation of level of future performance. Using changes in the following variables around the filings, the study investigated how changes in Risk Disclosure can change the range of investors' and analysts' predictions, as well as their confidence levels in their predictions: volatility of daily stock returns, trading volume, volatility of outstanding forecasts, volatility of individual forecast revisions, and divergence in individual forecasts. Generally, risk disclosures considered to be "boilerplate", as managers may have biasness in disclosing favourable or avoiding disclosure of unfavourable information. Mandatory textual risk disclosures may expose such undiscovered risk elements and contingencies, influencing investors' risk perceptions. Finally, the study discovered that increased or changed risk exposure in a SEC filing is positively related to fluctuations in daily stock returns, volatility of negative daily returns, trading volume before and after two months of the filing, dispersion of outstanding forecasts, and volatility of forecast revision.

Bakar & Uzaki (2014) conducted a study on companies listed on the Malaysian Stock Exchange. The companies were categorised as shariah-compliant companies and non-shariah-compliant companies. The study's sample comprises 476 firms that listed on the Malaysian Stock Exchange over a 12-year period from 2000 to 2011, including 420 shariah-compliant companies and 56 non-shariah-compliant enterprises.

The study was aimed at analysing the impact of the reputation of underwriters and disclosures of risk factors on IPO performance. The results indicated that 28.82 per cent of shariah-complaint companies and 26.63 per cent of non-shariah-complaint companies remained under-priced respectively. The findings of the study reported that the reputation of underwriters had a significant influence on the IPO performance (under-priced) in shariah-compliant companies but did not have a significant effect in the case of non-shariah-compliant companies. The better the repute of underwriters, the less Shariah-compliant firms stay under-priced. A reverse trend was noticed in non-shariah-compliant companies, whereas low underwriter reputation led to a lower number of companies remaining under-priced. The statistical output of the regression analysis showed that the risk factor has a significant influence on the IPO performance.

Campbell et al. (2014) examined the informational insides, categories, and extent of risk factor disclosures in 9076 corporate filings submitted to the SEC from 2005 to 2008 in the US for the purpose of analysing market-oriented risk, informational asymmetry, and stock returns. Risk proxies were shown to be positively related to risk factor disclosure. This relationship changes depending on the subcategories of firm risk. Post-disclosure market-oriented assessments of company risk are also favourably linked with risk factor disclosures. However, such disclosures are negatively linked to abnormal returns at the offer document release date. Hence, mandatory risk factor disclosures enable investors to take informed decisions.

Mousa et al. (2014) studied the US-based high-tech companies that issued IPOs during the years 2001 to 2005. This time period strategically falls between the internet bubble period (1999-2000) and the financial recession period (2008-2009). The study was aimed at determining the effect of risk factors disclosed in the IPO prospectus on the short-run performance of the IPO as well as the long-run survival of the firm. Internal risks and external risk factors were considered as independent variables, whereas IPO firm failure was taken as a dependent variable. Regression analysis was adopted to measure the impact of predictor variables on dependent variables by using size of age, firm size, use of proceeds and research & development intensity as controlling variables. The findings suggested that legal liability and market risk, as a proxy for external risk factors, have a negative influence on IPO investors' valuations,

whereas the influence of the internal risk factors on the same was not so significant. In addition to the above, the findings further revealed that external factors have a negative impact on investor valuations in the short run, as well as on the survival of firms after IPO in the long run.

Wyatt (2014) investigated whether the different identified types of uses stated for the funds in the prospectus, which is a risk proxy, are related to company survival, future value, and its operating performance. Content analysis was used to examine the prospectuses of 241 Australian IPO firms that went public between June 1994 and December 2000. The study found that proceeds are generally used for investment for growth, production and financing activities. The "use of IPO proceeds" for growth investment is favourably associated with under-pricing, while use for financing activities is adversely associated with firms' future value. This disclosure provides incremental information which helps in predicting the IPO firms' survival. The findings also indicated that the 'use of proceeds' for exploration, investment expenditures, and acquisitions is adversely correlated with the market value of stock in the first few years after a company is listed.

Ding (2016) studied IPO prospectuses of 1,661 companies listed on the Australian Stock Exchange from January 1st, 1996, to December 31st, 2007, to examine the relationship between textual risk revelations and initial under-pricing. It was discovered that the number of risk factor disclosures had minimal effect on initial under-pricing. The disclosure of informative risk factors reduces the uncertainty of IPO performance, as relevant risk factor disclosures have lower ex ante uncertainty. The findings indicate that quality disclosures of downside risk might help investors in evaluating IPOs.

Hope et al. (2016) identified a method for determining the amount of specific qualitative risk disclosure and investigated the determinants which cause variations in specificity. It was also examined whether such disclosure is beneficial to investors and financial analysts. It was found that firms having high proprietary expenses provide fewer specific risk variables. There is a positive relationship between specificity and three-day CAR. A higher degree of specificity is related to IPO market responses to 10-K filings in a substantial and favourable way. It also enhances the

confidence and reliability of analysts. Hence, more precise qualitative risk disclosures proved to be beneficial both to investors and analysts.

Komenkul et al. (2016) investigated 245 IPOs of companies that were registered with the Thai stock exchange. The study examined the impact of disclosed information about risk factors on IPO performance. The OLS regression model was employed for the statistical analysis to assess the effect. Further ex-ante uncertainty and signaling and impresario hypotheses were tested. Ex-ante uncertainty is represented by firm size, age, the time lag between the IPO offer date and the first trading date, the amount of government involvement in the firm, earnings per share, return on assets, return on equity, and the percentage of foreign and institutional IPO subscribers. The stock return of the IPO was calculated using Cumulative Abnormal Return and Buy-and-Hold Abnormal Return. The statistical results showed a significant influence of the amount of use of IPO proceeds disclosure and ex-ante uncertainty on the underpricing of IPOs in Thailand. Furthermore, the findings also suggested a positive impact of government ownership on the performance of IPOs in the long-run.

Papa (2016) performed a quantitative and qualitative comparison of the risk reporting materials of IPO prospectuses for a sample containing six firms each from the manufacturing and IT sectors listed on the Milan Stock Exchange of Italy for the period of 2000 to 2005. Because of its high degree of competitiveness and possible development prospects, the IT industry firms are included in the sample, whereas the manufacturing firms were picked to represent the other extreme. The study's main goal was to provide more empirical data for regulators and accounting standard setters to use in establishing "best practices" for risk reporting and analysing how industry influences risk disclosures. The degree of risk information is assessed through content analysis based on a coding measurement that includes seven main risk categories, namely environmental risks, operational risks, financial risks, empowerment risks, information technology risks, integrity risks, and information decision-making risks, and further seventy-six sub-risk categories. Risk disclosures in the IT industry are on average greater than in the manufacturing sector. The study discovered that when it comes to the five risk categories, namely competition, industry, shareholders, human resources, and product development, both types of industries follow similar trends.

Moreover, IT firms seem to give a greater share of forward-looking risk information in respect to industry risk.

Gumanti et al. (2017) explored the impact of various risk disclosures in the Indonesian prospectus on the first day returns of the IPO. The study analysed 290 IPOs enlisted on the Indonesian stock exchange from 1989 to 2005. The study considered non-accounting variables (Risk factors) disclosed in the initial public offering prospectus, which are the percentage of retained ownership by issuers, the use of proceeds for investment and the size of the IPO. The data was analysed by employing multiple regression as a statistical technique. The findings observed a positively significant influence of different risk factors disclosed on the IPO return. 81.72% of IPOs were found to be under-priced. IPOs with large size showed more inclination towards under-pricing as compared to IPOs with smaller size. A negative and non-significant effect of the level of ownership retained and the size of the IPO has been noticed on the IPO performance.

Falconieri & Tastan (2018) analysed the impact of the length of the admission document and the lengthier risk factor section on IPO pricing by means of a sample of 320 fixed-priced IPOs that occurred in the UK from 2004 to 2012. During the study period, 320 out of 389 IPO offers in the United Kingdom used the fixed-pricing IPO issuance technique. They utilised conventional control factors such as whether the business was VC-backed or not, whether it was listed on the Alternative Investment Market or on the Internet, the IPO proceeds, the company's age, and the reputation of the underwriter. Moreover, they also included industry and year dummies, and the average pre-IPO market for control over the market and industry conditions. According to the findings, the more information in the IPO prospectus and the disclosure of risk factors, the less likely the IPO will be under-priced. It also showed a substantial positive impact on the offer price. It was also found that the opening price was consistent with the offer price decided in a "pilot fishing" stage.

Jain & Vasudeva (2018) analysed the impact of various categories of risk factors in IPO prospectuses on short-term under-pricing through a sample of 249 IPOs that went public between 2011 and 2016 in India. The risk factors were identified through content analysis and categorised as on average 40 internal and 12 external risks,

consisting of 6 management risks, 13 operational risks, 13 financial risks, 7 legal risks, 7 market related risks, 5 regulatory related risks, 1 international issue and 1 technological risk. Control variables such as issue size, firm age, listing delay, type of issue, and number of underwriters were used to examine the impact of internal, external, and investment risk categories on two different dependent variables, namely under-pricing on the initial day and under-pricing after one month of IPO listing. Risk disclosure had no effect on under-pricing on the day of listing or one month later, according to the regression results. Except for the management risk category, the various types of risk disclosure have had little influence on under-pricing. The BSE Sensex, on the other hand, has had a considerable influence on under-pricing. Other factors influencing the degree of risk disclosure in the IPO prospectus include the number of underwriters/lead managers, issue type, listing delays, and business age.

Wasiuzzaman et al. (2018) observed a significant role of the IPO prospectus in the context of investors. The study examined the 96 IPOs listed on the Malaysian Stock Exchange from 2009 to 2013. An Ordinary Least Square Regression statistical technique was employed on the data. The first day of return of the IPO was acknowledged as a dependent variable, whereas internal and external risks were recognised as independent variables in the study. The age of the firm and the size of the IPO were considered as control variables. They identified sixteen different types of internal risks, twelve types of external risks, and five different types of investment risks. The results implied a significant positive impact of overall risk disclosure and investment risk disclosure on the initial IPO returns. Internal and external risks have less significant influence on the IPO's performance. The findings advocated that higher transparency of risk factors in the IPO prospectus enhances the high initial return and backs up the ex-ante uncertainty hypothesis and the signaling model.

Hussein et al. (2019) studied 355 IPOs listed on the Chinese stock exchange from October 30th, 2009 to December 31st, 2012. The researchers analysed the effect of risk factors unveiled in the IPO prospectus on the initial return of the IPO. Market conditions, characteristics of the firm, issue-specific characteristics that affect the opening price return, closing price return, and the 21st trading day return were categorised as control variables. Regression analysis was implemented to examine the relationship. The first regression equation observed the significant positive effects of market momentum, firm size, and offline and online subscriptions on opening price

return. The second regression equation revealed the effect of litigation risk among other control variables on the IPO pricing. The equation described the higher litigation risk by giving a higher IPO return. The third regression equation established a positive and substantial effect of the offline and online over-subscriptions and market conditions, whereas the negative effect of the IPO offer size on the initial IPO return. The IPO's monthly closing return was used as a dependent variable in repeated analysis and observed a positive effect of offline and online over-subscriptions and market conditions on the under-pricing of the IPO.

McGuinness (2019) investigated how voluntary disclosures in IPO prospectuses affected IPO demand for IPO subscription, price fitting, initial returns, and post-market liquidity in Hong Kong. Voluntary disclosure focuses on two key aspects of risks: risks related to the issuers' business and offer; and risks concerned with the intended use of raised funds. For this purpose, the 269 prospectus documents of all the IPO firms listed on the main board of HKEX from 2005 to 2009 were examined and four risk factor categories were identified, namely global risk factors, business risk factors, offer risk factors, and issue risk factors. The use of IPO proceeds is mainly utilised for new investment purposes, debt repayments, and additions to working capital. The regression findings revealed a strong positive relationship between issue-based risk variables and return volatility in the first 10 days of listing, although this relationship weakens beyond one month. The association between after-market return volatility and the aggregate of stated business risk statements and/or global risk variables was insignificant, but these categories exhibited strong positive relationships with long-term abnormal returns. Intended uses of proceeds for investment purposes were highly subscribed to, and the resulting initial and post-market returns were considerably higher. The findings also showed that in an endogenous context, the primary impacts on investment and debt utilisation were substantially intact.

Ng & Lee (2019) explored whether the risk factor unit of IPO prospectuses provided investors with enough risk-relevant information. A comprehensive content analysis of 118 Malaysian IPO prospectuses issued between 2009 and 2016 was undertaken to develop an aggregate measure of risk disclosure. Initially, the risk variables were classified into four main categories: macro-environmental sources, industrial sources, internal sources, and other sources. Further taking into account the management's viewpoint, four more categories were identified: likelihood of loss, variance, lack of

information, and lack of control. Three control variables that were included in the logistic regression are: leverage, market capitalisation, and price to book value. The findings indicated that the aggregate risk indicators derived from prospectus texts failed to accurately forecast the following outcomes: volatility of share pricing, systematic risk, and likelihood of share price falls.

Kuswanto (2020) explores how risk information provided in 62 Indonesian IPO prospectuses between 2017-2018 impacts the first day returns of IPOs. In this study, risk disclosures are classified as both qualitative and quantitative. The three factors that make up qualitative risk disclosure are operational risk, general risk, and investment risk, which are expressed textually in the prospectus as a number of risk statements. Meanwhile, different financial measurements are used to assess quantitative risk disclosure, including liquidity, earnings variability, sales growth, firm age, and reputation of auditors. On a qualitative aspect, the regression findings show that general risk and investment risk disclosure have a negative impact on initial IPO market performance. These findings back up previous research by Abdou & Dicle (2007) and Murugesu & Santhapparaj (2010). In terms of quantitative disclosure, this study shows that the firm's age and reputation of auditors also have a negative effect on the initial return. This finding contradicts the study by Murugesu and Santhapparaj (2010). However, when qualitative risk variables are combined with quantitative risk variables, qualitative risk variables do not have enough relevance to explain stock returns, demonstrating that quantitative information has a greater function in explaining initial stock returns. The study indicates that investors have a negative perception towards risky information, which results in a reduction in the level of under-pricing.

2.5 SUMMARY OF THE LITERATURE

The effect of risk disclosure on IPO initial returns or under-pricing has mostly been studied in the literature through two aspects: the effect of risk on return and the benefit of information disclosure on the valuation of IPO shares. Bhabra and Pettway (2003), Nam et al., (2008), Hanley and Hoberg (2008), Chahine and Filatotchev (2008), Kothari et al, (2009), Arnold (2011), Loughran and McDonald (2013), Fische et al. (2015), Brau et al. (2016), Hope et al. (2016), Rasidah et al., (2017), Crain et al. (2017), Hawaldar et al. (2018) etc. all showed how prospectus information whether

voluntary or mandatory in the prospectus affects IPO share pricing. Abdou and Dicle (2007), Deumes (2008), Spindler (2009), Hill and Short (2009), Santhapparaj and Murugesu (2010), Bozzolan and Ipino (2011), Huang et al. (2011), Karvet and Muslu (2011), Mousa et al. (2014), Ding (2016), Komenkul et al. (2016), Papa (2016), Gumanti et al. (2017), Hussein et al. (2017), Gaulin (2017), Wasiuzzamn et al. (2018), Falconieri and Tastan (2018), Jain and Vasudeva (2018), Hussein et al. (2019), McGuinness (2019), Ng and Lee (2019) and Kuswanto (2020) etc. investigated the impact of risk factor disclosures on the IPO performance. Leone et al. (2007), Wyatt (2014) and McGuinness (2019) have investigated the impact of disclosure of intended use of proceeds as a risk proxy on the degree of under-pricing. While Cazavan and Jeanjean (2007) and Balakrishnan and Bartov (2011) have used earning forecast disclosure as a risk proxy in their studies. In the IPO literature, market performance has been measured using stock returns in short run as well as long run. The short-run market performance is measured using both the first-day and post-day performance measures. It is evaluated by analyzing the first-day raw return (Abdou and Dicle, 2007; Wasiuzzamn et al., 2018; Jain and Vasudeva, 2018) and the market-adjusted abnormal return (Aussenegg, 2006; Agathee et al., 2012; Otchere et al., 2013; Berk and Peterle, 2015; Komenkul et al., 2016).

Risk factors disclosure in the prospectus are analysed through content analysis. In content analysis, the number of words, sentences, and page proportions are used in content analysis, and the number of risk sentences is used as a unit of measurement in a number of studies (Deumes, 2008; Hanley and Hoberg, 2008; Spindler, 2009; Bartov, 2011; Bottazzi, 2015; Ding, 2016; and Falconieri & Tastan, 2018). It is also observed that almost all the studies have used different multiple regression equations to estimate the relationship between the dependent variable and different independent variables considered in their respective studies (Bhabra and Pettway, 2003; Leone et al., 2007; Li et al., 2005; Abdou and Dicle, 2007; Cazavan and Jeanjean, 2007; Shi et al., 2007; Nam et al., 2008; Deumes, 2008; Hanley and Hoberg, 2008; Kothari et al., 2009; Arnold et al., 2010; Huang et al., 2011; Loughran and McDonald, 2013; Mousa et al., 2014; Wyatt, 2014; Bottazzi, 2015; Ding, 2016; Gumanti et al., 2017; Hussein et al., 2017; Falconieri & Tastan, 2018; and Wasiuzzamn et al., 2018; Jain and Vasudeva, 2018; and Kuswanto, 2020).

2.6 REASERCH GAP

Following a thorough examination of the outcomes of past research efforts, a significant research gap has been identified. Numerous research studies have been conducted to measure the effect of risk disclosures on IPO initial returns in various stock markets across the globe. However, relatively few studies have been conducted on the Indian stock market. The majority of previous studies considered only hi-tech or retail industries to measure the effect. But other economic sectors still remain untouched in this context. No sincere efforts have been made to examine the effect of risk disclosures in the IPO prospectus on IPO performance in other major sectors.

Moreover, it has also been observed that no significant research has been conducted on investigating the relevance of risk factor categories as per their risk-related information. As Wasiuzzaman et al. (2018) explain in the limitations of their research, the prospectus lacks a proper disclosure framework. Some companies may have characterised comparable risk variables in multiple risk categories, whilst others may have reported irrelevant risk elements under risk categories. So there is an urgent need for a consistent structure for reporting risk-related information in IPO prospectuses. It has also been observed that similar risk factors are described under different categories by Indian companies from the same industries. Some may also disclose irrelevant risk factors under prevalent generic risk categories.

Keeping in mind the aforementioned issues in the IPO market, as well as the European Securities and Markets Authority's release of the New Prospectus Regulation, the present study is an attempt to identify mutually exclusive risk categories for an IPO prospectus and to examine the effects of these identified risk factor categories on IPO market performance in the short run. The impact of risk categories across various sectors has also been studied in this study.

2.7 CONCLUDING REMARKS

This chapter serves as a basis for highlighting key variables for a study on risk factors determining IPO performance. Following a thorough assessment of the literature, diverse data and information have been collected together, and gaps in previous studies have been found. In the following chapters, the factors revealed from the

literature study were analysed and tested utilising appropriate research methods and statistical approaches. The next chapter describes the research objectives as well as the research methodology applied in the study.