

**Post-IPO Acquisitions: A Study on Influence of Acquisition
Activity on Long-Run Performance and Investment Choices of
IPO Firms**

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**Submitted By
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DECLARATION

I, **B Ashish**, hereby declare that the thesis entitled, “**Post-IPO Acquisitions: A Study on Influence of Acquisition Activity on Long-Run Performance and Investment Choices of IPO Firms**”, submitted by me under the guidance and research supervision of **Prof. V. Mary Jessica** is a bonafide research work which is also free from plagiarism. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodganga /INFLIBNET.

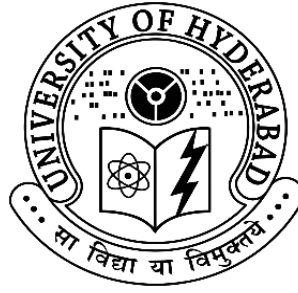
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Research articles related to the topic of this thesis have been:

A. Published in the following publication:

1. Published paper ABDC ‘C’ listed journal titled “ IPO Firms Subsequent Acquisition Activity and IPO Underperformance” in International Journal of Economics and Financial Issues, vol:9(6), pp.29.ISSN:2146-4138

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B. Presented in the following conferences:

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2. Presented a paper titled “Impact of GST on Inflation” in “Recent Reforms Initiated by Government of India and its Impact on Indian Economy” at CES College of Arts and Commerce, Goa.

Further, the student has passed the courses towards fulfilment of the coursework requirement for Ph.D. The candidate has completed and passed the following self-study courses towards for Ph.D. as –

S.No.	Course Name	Credit	Pass/Fail
1	Financial Management and Strategic Finance	4	Pass
2	Financial Services and SAPM	4	Pass
3	Quantitative Techniques	3	Pass
4	Academic Writing	4	Pass
5	Research Methodology	3	Pass

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DEAN

Dedicated to my loving father, Late Sri Ramesh Balapur

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Abstract

The study is aimed to examine the influence of acquisition activity on the long-run performance and investment activity of IPO firms. The objective of the study is to examine the impact of acquisition activity on the long-run stock performance and long-run operating performance of IPOs. Moreover, the study also aimed to investigate IPO grading impact on the IPO acquirer performance and acquisition activity impact on the investment choices of IPO firms.

A total of 618 initial public offers floated during the financial year 1995 to 2018 were considered for the study. Buy-hold returns model was used to evaluate the long-run stock performance, profit before income tax depreciation and amortization(PBITDA) scaled by total assets to measure long-run operating performance, and lastly, CAPEX to total assets is used to measure the investments choices. The study took acquisition activity as a dummy variable where “1” is given for the IPO firms which acquired the other within three years of listing on to the exchange. The BHR model was employed for the first study to investigate the returns generated for the first three years of listing. The first three-year returns of the IPOs are regressed using multiple regression analysis revealing that the acquisition activity positively and significantly influenced the long-run performance for first, second, and third years of listing. The second study regression analysis results reveal that the IPO grading influence was negative and significant during the first two years on IPO acquirer performance, but the IPO grading impacts faded out in the third year. The third study regression results imply that the acquisition activity influences the operating performance positively and significantly for the first two years, and in the third year, the effect fades. The final study regression analysis reveals that acquisition activity did not impact the capex intensity in the long run.

The study attempts to explore the acquisition activity impact on the long-run performance of the IPOs, both stock and operating performance. It also tries to find the influence of the acquisition activity on the investment activity. The results of the first objective unravel that the investors perceive that the acquisition activity taken by the IPO acquirers are wealth increasing. These results are in line with Arian and Stulz (2016), Bessler and Zimmermann (2011). The results of the second objective reveal that the graded IPO acquirer is negatively influencing the long-run stock performance. The outcomes of the third objective reveal that the acquisition activity taken up by the IPO is increasing the operational efficiency, which is construed in the operating performance. The operating performance of IPO acquirers is translated into stock performance, which is discussed in the first objective. Due to the commitment of a huge outlay of capital invested in the acquisition activity by the IPO acquirer, the firm is not hindering investments in the capital expenditure, which is essential for the growth. These results are in line with the findings of Wiggenshorn, Gleason et al. (2007).

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CHAPTER 1

1 Introduction

“We don’t have to make IPO for an financial reasons. We would like to do it for strategic reasons – Ron Sommer”

Many research studies have been conducted on IPO firms' long-run underperformance (Loughran & Ritter, 1995; Jay R Ritter, 1991). The desire of IPO firms to acquire other firms immediately after the public offering has been studied (James C Brau & Fawcett, 2006; Celikyurt, Sevilir, & Shivdasani, 2010; Wiggenhorn, Gleason, & Madura, 2007). However, there are rarely any studies that have explored the influence of acquisition activity on India's IPO performance. Acquisitions are complex processes even for mature firms, and so handling acquisitions for a newly public firm is a humongous task. Studies have shown that new public firms are prolific acquirers, and acquisitions significantly affect IPO performance.

Convention shows that newly established firms in their development trajectory go for public offering with the aim to raise capital to fund their expansion or growth. At this phase, the firms experience capital crunch in order to meet the demand for the product or service. In order to satisfy the demand, firms go public to expand their operations. This was considered as the primary motive for firms to go public. However, many studies have shown that the other trajectory of post-IPO firms. For instance, Jain and Kini (1999) have shown that firms after listing in IPO would either grow organically, fail outrightly, or become take-over targets.

The survival of a firm immediately after going Public is quite critical. A firm that has been a private organization in the past loses its competitive advantage as public firms have to share their financial and operational information to the Public which was otherwise not necessary in the past. Moreover, a firm listed in a particular stock exchange has to follow strict norms to stay listed. A firm that has a significant structural change in the organisational

and management structure finds it difficult to cope with the expansion pace. Hence, many IPO firms have underperformed after listing.

The takeover of new public firms is a common phenomenon in the market. New public firms have growth opportunities compared to mature firms because for the older firms growth opportunities contract with time. Hence newly public firms are the right targets for acquiring firms (De & Jindra, 2012). Another aspect is that private firms that are actively looking to sell themselves use IPO as a means to sell at the best value (Lian & Wang, 2012).

The growth or expansion of a firm's operation is an essential priority for an organization. To expand the operation, one of the strategies adopted by a firm is to grow organically. A firm aims to grow inwardly by increasing CAPEX and by investing in R&D. CAPEX and R&D are the important determinants for surviving competition. In order to come up with a better product or to be able to meet the demand of customers, a firm has to invest in CAPEX and R&D.

IPO firms have to grow continuously in order to stay listed. IPO firms can either adopt an organic-based growth strategy or an acquisition growth strategy. A newly public firm with a large capital infusion and tradable stock opens up an opportunity for acquisition (Hovakimian & Hutton, 2010). However, it cannot be certainly concluded whether a firm goes public to acquire or does it offer opportunity for acquisition after it goes public. Still, newly public firms are prolific acquirers (Arikan & Stulz, 2016).

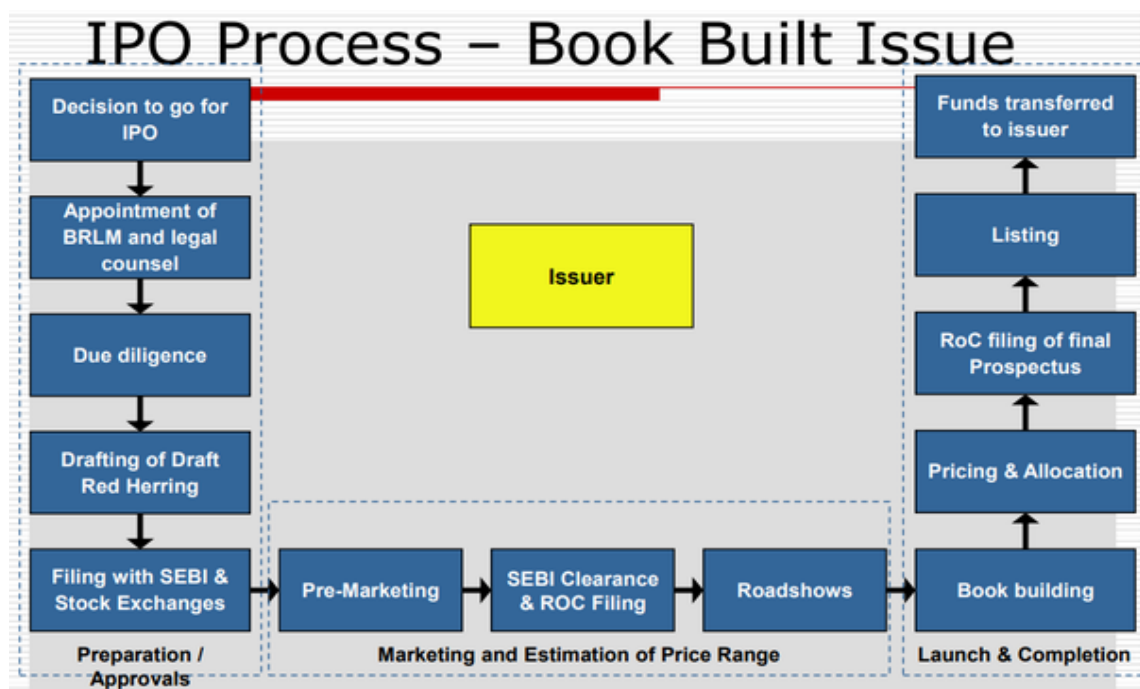
The rest of the chapter is structured as follows. The first section explains an IPO and its process to give an understanding about public offering. The second section deals with the provisions in IPOs. The third section deals with SEBI and explains the differences in the guidelines laid by Western and Indian regulators. And the fourth section gives an overview of the theoretical framework and a conclusion.

1.1 Initial Public Offer (IPO)

An IPO can be defined as a process “through which an unlisted firm makes either a fresh issue of stocks or an offer for sale of its existing stocks or both for the first time to the public”. As discussed earlier, a young firm seeking an infusion of capital for its business to expand mostly goes public, and a large private firm also goes public in order to publicly trade in a stock exchange. Unlike in the secondary market, in the initial public offering money invested by the Public directly goes to a firm. An IPO helps to tap a large group of the Public to invest in a firm.

To go public, a firm has to follow the stringent guidelines laid out by the respective regulatory agencies around the world. The book-building process is the most commonly employed process to float an IPO. The steps involved in floating an IPO are shown below in Figure 1.1.

Figure 1.1 The IPO Process



Source: <https://www.collidu.com/presentation-ipo-process-in-india>

As shown in Figure 1.1, the process of IPO includes preparation or approvals, marketing and estimation of the price range, and lastly, launch and completion. When a firm decides to go public, it has to appoint a book-runner lead manager (BRLM) or investment banker. The investment banker assesses the firm's valuation based on financial, management strength, and other significant determinants. The firm also appoints legal counsel to sort out legal filings to float the issue. After appointing the legal counsel, the investment banker conducts due diligence, which involves analysing every small detailed piece of information that can be sensitive in evaluating the firm's value. The investment banker then uses information collected from the due diligence to draft the red herring prospectus. The prospectus is a vital document for the firm that is enlisting because it contains every material information that is significant in evaluating the firm. The prospectus drafted has to be filed with the regulator and stock exchange.

The prospectus filed with the regulator and stock exchange is available on the website for public consumption. After this process, the public issue will be marketed and then the estimate price phase for the issue will start. The public issue premarketing activity assesses the demand and price of the shares floated through IPO. The price revision happens several times as the demand for the IPO changes. During the premarketing stage, the investment banker meets several institutional investors to familiarise the investors about the private firm that is put up for public offering. The purpose is to ascertain the demand of the investors. After evaluating the share price of the newly public firm, the investment banker files the documents with the respective country stock market regulator and registrar of companies for clearance. After getting the due clearance from the stock market regulator, the investment banker promotes the new issue by conducting roadshows. The investment banker then will approach several brokerage houses to promote the issue. The IPO process then enters into the final stage of launch and completion. In the book-building process, the newly public firm

gives the range of prices wherein investors can bid the price at which they want to purchase. Based on the bids received from the investors, if a hundred percent subscription of the IPO is completed, the offer price is decided based on the full subscription. Allocation of shares by the newly public firm is made according to the guidelines framed by the respective stock market regulator. The amount invested through IPO by the investors goes to the escrow account, not to the company. Once the full subscription is reached, the investment banker files a detailed subscription report to The Registrar of Companies (RoC). After filing the subscription report with RoC, the final prospectus is released. The final prospectus gives detailed information about institutional investors, high net worth individuals (HNI), and retail individual investors (the number of times RII subscribed), subscription amount, and other material information. After this, the company is publicly traded on the stock market.. A new public firm opens at an offer price and it closes with a closing price, which differs from the opening offer price. The closing price is regarded as the listing day closing price. Lastly, a firm can lay hands on the IPO amount, which is transferred from escrow to the company's account.

1.2 Provisions and Terms used in IPOs

a) Green Shoe Option (GSO):

Firms that are venturing to go public and raise capital through the sale of shares can stabilise price fluctuation through a legit mechanism known as the green shoe option. A green shoe option allows an investment banker to subscribe to fifteen percent of the shares over the subscription at the offer price. This mechanism can be exercised by the firms that are offering public issues through the book-building process. The investment banker and underwriters can exercise this option when the demand exceeds the supply, and the offer price is less than that of the listing price. From the investor's point of view,

an issue with this option creates more chances for share subscription. And the issue price is more stable after the issue is listed on the stock market.

b) Hard underwriting:

Hard underwriting is a process wherein an underwriter agrees to buy a definite amount of shares at an offer price. The commitment is made by the underwriter before the issue. This means that the underwriter guarantees a definite amount of money before the issue. The underwriter bears the risk of subscription. If the investors do not fully subscribe to the issue then the underwriter is bound to buy the issue.

c) Soft underwriting:

Soft underwriting is a process wherein the underwriter agrees to buy shares at the offer price after the issue. After buying the shares, the underwriter can attach the shares to the institutional investors. Unlike in the hard underwriting process, the risk of the underwriter is for a short span of time.

d) Safety net:

The safety net is a provision created by the issuing firm in consultation with the underwriter. The provision is that if the share price falls below a certain level after listing, the issuing firm is liable to buy back a certain number of shares at an agreed price level after a certain period of listing. The safety net provision is mentioned in the prospectus.

e) Differential pricing :

Differential pricing is a provision wherein different groups of investors can subscribe to the issue at different prices. The issuing firm can give a maximum of ten percent of discount to the retail investors.

f) Closed or Open book:

In an open book issue, an investment banker confirms that investors are able to access the demand by the various other investors for an issue displayed on the stock market

website. In this system, the investors' decisions can be based on other investors' demands. The book-building process uses the open book system for the bidding process. In the closed book, the demand for various other investors is not displayed on the stock market website. This system leaves the investor to rely on his/her own analysis to decide whether to buy the issue or not.

1.3 The Lifecycle of the IPOs

The outcomes of the initial public offers vary because the IPOs could either fail outrightly or survive. The firms could survive independently or get acquired by other entity thus losing their identity (Jain & Kini, 1999). A new public firm that fails outrightly comes under the terminal stage while a firm that survives independently or gets acquired is considered to be in evolving stage in the life cycle of IPO (Jain & Kini, 1999). The evolution of a firm after listing in IPO depends on various determinants. Jain and Kini (1999) in their study, identified issue size, high R&D investment, restriction from takeover, and low chance of being acquired as determinants. The size of the issue, age of the firm, reputed underwriter, and pre-IPO operating profit also positively influence the survival of the firm (Baluja & Singh, 2016; Jain & Kini, 1999). In their study, Jain and Kini (2000) found that the presence of venture capitalists influences the actions of management, investment bankers, and analysts. Capitalists act as catalysts to attract institutional investors, which increases the probability of survival of firms. The board plays a crucial role in managerial decisions. The board's independence increases the likelihood of the survival of the IPO firm (Chancharat, Krishnamurti, & Tian, 2012). Further, the survival of the IPO firm depends on the pre-IPO managerial commitment to the R&D spending and in diversifying the product line. This enhances the survival probability of the IPO firm (Jain & Kini, 2008). Strategic choices such as alliances, market expansion, and restructuring the senior leadership team or the board of directors have a greater impact on the survival of the IPO firm (Chandy & Sivasubramaniam,

2011). Often the IPO firm's survival depends on variables such as the size, age of the firm, initial returns, hot markets, and retention of shares by the entrepreneur (Hensler, Rutherford, & Springer, 1997).

Baluja and Singh (2016) study analysed the newly public firms listed from 1992 to 2011 in India. They analysed the characteristics of the IPO firms that failed and survived. They found that mature firms with large issue sizes, high subscriptions, and affiliation with the reputed underwriter increase the probability of survival of IPOs. Furthermore, they highlighted that underpricing, and the delay time between IPO, listing, and market negatively influences the sustainability of IPOs. Good governance practices and ownership retention of the IPO firms increase the survivability of the IPOs. They also found that the independence of the board increases the survival of the IPO firms.

1.4 Indian Context

Emerging economies like India have challenges in expanding the economy, which includes the capital market (Dharmapala & Khanna, 2013; Kumar & Vashisht, 2009; Marszk, 2012). The liberalisation of the Indian economy through economic reforms of 1991 reduced government regulations and opened the economy to a free market system (Ahluwalia, 2002). This economic reform revamped India's economy in accordance with the best governance practices followed in the US and Europe, which are targeted to provide trust and protect the interest of investors (Ekkayokkaya & Pengniti, 2012). SEBI, the regulatory authority for India's capital market, was founded in 1988 and attained statutory status in 1992 under the Securities and Exchange Board of India Act 1992. This development was a crucial element of the economic reforms initiated in 1991 (Ahluwalia, 2002). Like any other capital market regulator in the world, SEBI was also formed to eliminate insider trading, monitor takeover bids, facilitate electronic trading, and dematerialise trade.

In order to protect the investors' interests and trust in capital markets, SEBI has taken up many reforms. Unlike in the West, the allotment of the IPOs is not a prerogative of the investment banker. SEBI has laid down clear guidelines for the allotment of shares to different parties. 50% of shares are allocated to qualified institutional investors (QIB), 15% of shares are allocated to high net worth individuals (HNI), and 35% of shares are allocated to retail individual investors (RII). SEBI introduced this reform to protect the investors' wealth from fly-by-night entrepreneurs. The IPO process in India is among the most transparent processes in the world. SEBI allows RIIs and HNIs to know the bidding process of institutional investors and their demand for subscription to IPOs is displayed publicly on the concerned stock exchange website. This allows retail investors to make informed decisions about their investments.

One of the reforms made by SEBI with regard to IPO was to introduce and allow intermediaries to grade the IPO. IPO grading was made mandatory in May 2007 by SEBI. IPOs have to go through the mandatory grading process by an independent rating agency. IPOs are graded from one to five, where one is the lowest or weak, and five is the strongest in fundamentals. The mandatory IPO grading enforced by SEBI aims to diminish information asymmetry among investors, empowering them to make well-informed decisions about their investments. (Deb & Marisetty, 2010; Poudyal, 2008).

Soon after the liberalisation of the economy, the Indian capital market experienced the biggest stock market frauds (Gupta & Gupta, 2015). In order to curb further damage and to retain the investors' trust, SEBI came up with the above regulation.

1.5 Theoretical Background

A large number of studies have explained the relationship between IPO performance and post-IPO acquisition within the framework of signalling theory, agency theory, neo-

classical theory and window of opportunity theories. These theories have explained the phenomenon at large.

1.5.1 Agency Theory

This theory refers to the agency relationship that occurs where an agent takes decisions on behalf of the principal entity, and where the decisions of the former impact the latter (M. Jensen & Meckling, 1976). Here, an agent is supposed to be rational in decision-making and has to opt for the available opportunities in the best interest of the principal. But at times, the agent or manager puts his/her self-interest over that of the principal or shareholders, which triggers the conflict. This conflict of interest between manager and shareholders costs the latter, and it is regarded as agency cost (Easterbrook, 1984; M. Jensen & Meckling, 1976).

Whenever a private firm goes public, the dilution of the ownership and the addition of a large number of shareholders occurs. Low ownership retention by the management team may result in giving priority to their self-interest rather than to the firm. Ownership retention of the management team will result in better performance as the management team aligns their interest with the firm (Bharat A. Jain & Omesh Kini, 1994).

Acquisition is a highly complex and complicated process in assessing the synergy generated while making the acquisition decision that has to be taken in the interest of the firm. At times, the manager may take decision in his/her self-interest which may result in poor acquisition benefits and agency cost (M. C. Jensen, 1993; Mueller, 1972).

1.5.2 Neo-Classical Theory

The neoclassical theory postulates that managers take wealth maximising decisions by making the best use of scarce resources (Maksimovic & Phillips, 2013). This theory is a contrast to the agency theory, where the managers actively prioritize their self-interest over

the shareholders. Mergers increase the efficiency of the firms when there are industrial shocks, deregulation, or policy changes that impact the entire industry (Jovanovic & Rousseau, 2002; Mitchell & Mulherin, 1996).

In private firms, the management is highly concentrated, and there rarely exists any difference between owner and managers, but as soon as it becomes a public firm, the management becomes diversified. The owner and managers become two separate entities whose decision impact one another. The managers are expected to act in the best interest of shareholders and to make the best use of underutilised resources. Post-IPO the performance of the firms mainly depends on the managers' wealth-creating decisions. IPO acquisitions and subsequent positive performance can be explained by the neoclassical theory (Arikan & Stulz, 2016; Bessler & Zimmermann, 2011).

1.5.3 Window of Opportunity Theory

The window of opportunity theory explains the exploitation of market anomalies which exist for a particular period. Whenever a private firm decides to go public, it has to time the IPO appropriately to achieve complete subscription. Market timing can explain the performance of IPOs. IPOs take advantage of the high IPO period to time their issues and sell their issues at a high price. Even young firms without any proper or established financial and operating history take advantage of the optimistic IPO wave period to float overpriced issues. These IPO firms generate negative returns in the long-run as the firms which are floated during the optimistic IPO period or hot market are often overpriced (Loughran & Ritter, 1995; Jay R Ritter, 1991). Hot markets and underperformance of IPOs are well documented (Helwege & Liang, 2009; Bharat A Jain & Omesh Kini, 1994; Loughran, Ritter, & Rydqvist, 1994).

Bidders while acquiring the target firm, exploit the market anomalies to time their acquisitions. Bidders pay the acquiring firm with cash or stock of bidders' firms or a mix of stock and cash. To exploit the overvalued stock, the bidders go for the acquisitions (Shleifer & Vishny, 2003). Acquirers who used stocks as acquisition currency to pay for the target firm have underperformed compared to acquirers who used cash (Chang, 1998; Martin, 1996; Palepu, 1986).

1.5.4 Signalling Theory

Signalling theory is one of the prominent theories to explain IPO performance (Bharat A Jain & Omesh Kini, 1994; M. Jensen & Meckling, 1976; Wayne H Mikkelsen, Partch, & Shah, 1997). Signalling theory has five components: signaler, signal, receiver, feedback, and signal environment. A signaler sends a particular signal intended to convey a particular message to the receiver. A receiver on the other hand receives the signal. But the question of whether the receiver has correctly deciphered the intended message can be known through feedback. In the whole process, the signal environment plays a crucial role, as any disturbance can alter the decryption.

A private firm that has decided to go public has well-informed insiders and uninformed new subscribers who intend to buy the issue. There exists information asymmetry due to the presence of both informed and uninformed investors. To reduce information asymmetry, the signaling mechanism is used to convey the quality of the firm. Underpricing of an issue is the result of information asymmetry. In other words, the larger the information asymmetry, the higher the underpricing would be (R. G. Ibbotson, 1975; Stoll & Curley, 1970).

1.6 Determinants of Post-IPO Performance

Extensive studies have been conducted that focused on explaining post-IPO performance and the determinants that influence post-IPO performance (Bharat A Jain & Omesh Kini, 1994; Loughran & Ritter, 1995; Wayne H Mikkelson et al., 1997; Jay R Ritter, 1991; Jay R. Ritter & Welch, 2002). The studies which focused on explaining the performance of IPO firms are divided into two: short-run and long-run performance. ‘Initial day returns’ or ‘underpricing’ are determinants that are used interchangeably for short-run performance. Underpricing is the most used determinant to denote short-run performance.

Most of the research studies conducted on IPOs have focused on explaining the underpricing of IPOs. Underpricing is the difference in the offer price and listing day closing price of an IPO firm on the day of listing. The phrase ‘leaving money on the table’ is also used to describe it. There are two dimensions to explain underpricing. One, a newly public firm intentionally underprices its issue in order to increase the demand for the IPO (R. G. Ibbotson, 1975). Two, investors who are too optimistic about a newly public firm’s prospective performance tend to pay more than the optimal price (Purnanandam & Swaminathan, 2004). Out of the two dimensions, most of the studies have agreed that firms underprice their issues in order to elevate the demand and compensate the investors for the information asymmetry. Many studies have identified that the determinant variables of both the capital market and corporate governance that alleviate underpricing.

1.7 Post-IPO Operating Performance

Similar to the long-run IPOs stock performance, the post-IPO operating performance of IPO firms is also negative (Bharat A Jain & Omesh Kini, 1994; Wayne H. Mikkelson, Megan Partch, & Shah, 1997). The operating performance of IPOs is influenced by the age of the firm, issue size, ownership retention, optimism in the market, accrual management,

underpricing, and many other variables (Bharat A. Jain & Omesh Kini, 1994; Kim & Weisbach, 2005; Wayne H. Mikkelson et al., 1997; Zingales, 1995).

The operating performance after a firm goes Public is also influenced by the Capex and R&D expenditure of the firm. Capital expenditure or capex is the essential component for most industries. The expansion and growth of a firm are determined by investing in capital expenditure. A firm's growth is propelled by new projects or expansion of the product lines to compete and sustain the growth. R&D is another significant component for a firm to remain relevant in the industry. Of course, R&D intensity varies from industry to industry, but it is an indispensable component. However, developing R&D is a long-run process which is why it is not easy to be emulated by other firms. Both CapEx and R&D intensity are growth strategies for IPO firms that strive to grow organically.

Many newly public firms adopt an acquisition-based growth strategy. Newly public firms are prolific acquirers (Celikyurt et al., 2010). Adopting an acquisition-based growth strategy gives a firm the ability to expand in new markets or diversify its business in a relatively low time. Diversifying the business reduces the risk for a firm that arises due to industrial downturns in a particular industry which can hedge due to diversification. Firms can access already developed R&D through acquisition which otherwise takes a long-run effort to develop the same. These advantages lure the newly public firms to go for the acquisition in order to take the leap rapidly. But the innate complexities in acquisition which are both cultural and operational, pose a greater threat to the newly public firms in sustaining the growth.

1.8 Conclusion

This introductory chapter provides a brief understanding of the topic. The chapter introduces the problem statement of how the newly public firm's long-run performance and

post-IPO acquisition are underexplored. It also engaged with the process of IPO and explained all the various steps involved in the process. Subsequently, an important process in IPO book building has been briefly discussed. The various provisions in IPO to monitor the price and demand of the issue have been discussed. The later section explains the life cycle of the IPO firms after listing on the exchange. It also discusses the various determinants such as venture capitalist backing, investment banker, ownership retention, and institutional investors' influence on the survival of companies that have undergone an initial public offering (IPO).. The next section discusses the Indian context, how the capital market regulator controls the entire IPO process and how it is different from the regulation in the Western capital market. Later, a brief overview of the theories which explain the IPO performance and post-IPO acquisition behaviour of the IPO firm is given. It discusses the agency theory, neo-classical theory, window of opportunity theory, signalling theory, and relevant studies to explain the phenomenon. Lastly, the post-IPO performance of both stock and operating performances, the organic growth, and acquisition-based growth adopted by the newly public firms are discussed.

CHAPTER 2

2 Literature Review

2.1 Introduction

This chapter provides a survey of the literature on IPOs and acquisitions. It has five sections. The first section provides a brief background of the study. The second section deals with IPO performance. The third section offers a review of the various studies conducted on IPOs and the rationale for firms to float for IPO. The fourth section looks at studies that focused on firms' desire to acquire after listing in the IPO. The fifth section discusses the relevant studies that deal with the acquirer's performance in general.

2.2 Background

A vibrant IPO market is crucial for promoting entrepreneurship in an economy (Black & Gilson, 1998). Initial public offer is the first step of a firm's history to evolve into a public firm (Bharat A. Jain & Omesh Kini, 1994). For a firm to evolve into a public firm means selling the shares directly to the investors on subscriptions and then listing the firm on a stock exchange (Jain & Kini, 1999). According to Jay R Ritter (1987), getting listed on a stock exchange comes at the staggering cost of about 28% of the total proceeds. Going Public comes with the huge expense of diluting the controlling rights of the promoters or entrepreneurs to float the IPO (Booth & Chua, 1996). Before the IPO, there is little information about a firm, but if the firm is accepted by investors it is considered as the first step to success (F.-t. Mousa, Bierly, & Wales, 2014). A strong IPO market plays a prominent role in channelizing the funds of investors to the firms (Aktas, Croci, & Ozdakak, 2016). In a strong market, the prospective investors will be provided with the primary financial information in the prospectus. These IPO investors are primary users of financial reporting.

The prospectus includes the structure of a firm, i.e. the promoters, the board of directors, financial reports, risk and intended use of the IPO proceeds, and others. The

evolution of an IPO firm after the listing on a stock exchange is quite complex as the intended use of proceeds and evolution of the IPO firm do not often sync. After going public, a firm either survives independently or becomes an acquisition target or gets delisted (Jain & Kini, 1999). A new public firm adopts different growth strategies to be competitive in the industry and grow organically (Jain & Kini, 1999) or adopt acquisition technique for growth (Celikyurt et al., 2010). The acquisition-based growth technique is quite prominent with IPO firms, and this will be discussed in detail in the following sections.

2.3 IPO Performance

2.3.1 Underpricing or Short-run Performance of IPOs

R. G. Ibbotson (1975) examined the initial and post-market performances of IPOs in the United States of America (USA) that were floated during 1960. His findings revealed that the initial performances of the firms were positive. He concluded that the initial public offers were underpriced.

Jay R Ritter (1984) examined initial public offerings issued from January 1980 to March 1981 in the USA. His study showed that IPOs during this period generated 48.4 % of initial returns in hot markets and 16.1% of initial returns or underpricing in cold markets. The study also reported that the hot issues are staggered around a particular industry and all other industries do not show high returns.

Randolph P. Beatty and Jay R. Ritter (1986) in their study looked at underpricing technique using a sample of 1028 firms that went public between 1977 and 1982. They proposed that investment bankers whose reputations were at stake would try to minimize underpricing. They proposed that the investment banker who cheated through underpricing would suffer losses of potential clients.

Welch (1989) used signalling theory to analyse how high-quality firms would significantly underprice their IPOs in order to obtain high prices in seasoned equity offering (SEO). He argued that a low-quality firm invests highly in marketing to present itself as a high-quality firm. But it cannot underprice the issue and this is where the marketing cover is blown. Welch also demonstrated that a high-quality firm significantly underprices its issue in order to convey the quality, and also reap the benefits of high SEO price.

Allen and Faulhaber (1989) in their study reported that underpricing occurs in a particular sector at a specific period. This study developed a model to unravel this phenomenon. They suggested that an issuing firm has superior information about its prospects. They found that underpricing the issue conveys a positive prospect for the firm.

Muscarella and Vetsuypens (1989) examined 38 investment banks that went public from 1970 to 1987. They find that 17 of the 38 investment banks were underpriced by more than 7% and the rest were underpriced by about 2%. They concluded that the Baron(1982) model simply does not explain the complex underpricing puzzle with just information asymmetry.

Booth and Chua (1996) conducted a study on 2151 IPOs that went public from 1977 to 1988. They argued that underpricing was a technique used by the issuer to achieve the ownership dispersion. They suggested that promoting oversubscription and post-listing liquidity also influenced underpricing. Their findings also suggested that information cost incurred by investors shifts the equilibrium of underpricing. And information spillover can lower underpricing.

Loughran and Ritter (2002) in their study found that underpricing of the initial public offer has changed over time. It was 7 % in the 1980s, and it doubled to 15% from 1990 to 1998. It further went up to a whopping 65% in the dot com bubble period, i.e. 1999-2000, and then reverted back to 12 % between 2001 to 2003. They found that the winner's curse and

information asymmetry were causes for underpricing during the 1980s. They further found that change in the risk composition leads to high underpricing in the later years. Other than that, they also found that analyst coverage, CEO incentive, and venture capitalist backing affected the underpricing

Bradley and Jordan (2002) in their study looked at the prediction of IPO underpricing using four variables: share overhang, amendment in file range, venture capital, and lagged underpricing. They found that share overhang has a significant and positive influence on IPO underpricing. This variable explained 8% of the variation in underpricing. File range and share overhang were able to explain 21% of the variation in underpricing. Conflicting results were documented for venture capital backing as some industries have shown non-significant results. They also found that lagged underpricing by other IPOs within one month (in the first month of floating) has a significant and positive effect on underpricing.

Aggarwal, Krigman, and Womack (2002) developed a model to explore the relationship between underpricing and lockup period expiration. Firms that went public in 1990 were considered for the study and the sample size consisted of 618 IPO firms. Out of 618 IPO firms, about 171 IPOs were underpriced by more than 50%. The study produced three major findings. One, higher managerial holding and option holding would result in substantial underpricing. Two, substantial underpricing grabs the attention of non-lead analysts for coverage of that stock. Three, higher coverage results in a positive shift of the demand curve at the end of the lockup expiration. They concluded that substantial underpricing by managers would result in greater coverage of the stock, which then would create price momentum at the end of lockup expiration. Managers could sell their stocks at higher prices, which otherwise would have been lesser than the intrinsic value of the shares.

Lowry and Shu (2002) examined the relationship between litigation risk and underpricing of an issue. They analyzed 1841 public issues from the year 1988 to 1995. Of these 1841 issues, about 106 had lawsuits on them. They investigated the extent to which firms underpriced their IPOs as a form of insurance and whether the underpricing curbed litigation risk. They found that higher litigation risk led to greater initial day returns of IPOs. They further found the deterrence effect of IPOs and suggested that IPO firms that engaged in greater underpricing would significantly reduce or curb the litigation risk.

Lee and Wahal (2004) investigated the role of venture capital (VC) in explaining underpricing. Their study focused on IPO firms that went public from the year 1980 to 2000. They found that venture capital-backed IPOs were significantly underpriced than non-venture capital-backed IPOs. They concluded that the difference in underpricing between both samples ranges from 5% to 10.3 %. They also reported that the difference in underpricing was on the higher side during the bubble period.

Ellul and Pagano (2006) studied the underpricing of 337 British IPOs that went public between 1998 and 2000. They built a model to complement the information asymmetry explanation of underpricing with post-issue market liquidity. They explained that risk and uncertainty, which prevailed in investors over the liquidity of IPO after listing positively influenced issuers to underprice the issues. They found that expected liquidity after listing and liquidity risk were important determinants in underpricing.

Ghosh (2005b) studied the factors that influenced underpricing of IPOs in India. The study analysed 1842 IPOs from the year 1993 to 2001 that were listed in BSE. The study considered hot markets, group firms, and standalone firms as factors that influenced underpricing. The study found that in hot markets, IPO firms were less underpriced. This finding was contrary to Western studies which showed that group IPO firms were more

underpriced than standalone firms. The study also found that firms which went for SEOs were less underpriced. The study concluded with the observation that the Indian IPO firms were in line with the signalling theory.

Marisetty and Subrahmanyam (2010) examined the influence of group affiliation on underpricing using the tunnelling hypothesis and certification hypothesis. The study examined 2713 IPOs from the year 1990 to 2004. They found that the IPOs of group firms were vastly underpriced than that of standalone firms. This finding resonated with both domestic and foreign private firms. The study concluded that the tunnelling hypothesis explains the underpricing of the group companies better than the certification hypothesis.

2.3.2 The Long-Run Performance of IPOs

Jay R Ritter (1991) conducted the first academic study on the long-run performance of IPOs. Ritter studied IPOs issued from 1975 to 1984 in the USA. The study found that IPO firms that went public from 1975 to 1984 underperformed in the first three years of listing. The study also found that underperformance varied from year to year and from industry to industry. The study concluded that the patterns were consistent as the investors were over-optimistic in estimating the earnings of young firms, and firms entered the IPO market to take advantage of the “window of opportunity.”

Loughran and Ritter (1995) studied the initial public offers of firms from 1970 to 1990 in the US. A total of 4753 IPOs or SEOs were analysed in the study. The study found that IPOs underperformed after listing on the exchange. The average five-year returns of IPO was 15.7%, while for the non-issuer it was 66.4%.

Levis (1993) studied the initial Public offers made in the 1970s and 1980s. The study observed that IPOs underperformed by 29% until they had completed three years of listing. The study highlighted that firms should time their public offerings appropriately according to

the market. In other words, small firms go public when their performance is high. Levis also found that it is difficult for small firms to transition from private to Public when their performance is low (Campbell & Frye, 2006)

Bessler and Thies (2007) investigated the initial public offers of firms that were floated from 1977 to 1995 in Germany. The study examined the different determinants: index returns, underpricing, year, capital raised, and market value of the firm that could influence IPO performance. The study found that raising capital from the market significantly influenced IPO performance. They also found that only successful IPOs had the opportunity to raise capital from the open market.

Cai, Liu, and Mase (2008) studied IPOs floated on China's Shanghai Stock Exchange. The study observed that Chinese IPOs underperformed in the long run. The study found that the initial over-optimism and size of the issue were prominent factors in explaining the underperformance. Additionally, the study also stated that the pre-IPO earnings per share, the switch from bank capital to IPO, and the option to allow subscriptions to foreign investors were other factors that influenced the performance.

Sehgal and Singh (2008) investigated the factors that influenced the performance of IPOs floated on the Bombay Stock Exchange from 1992 to 2001. The study analysed 438 IPOs and it observed that the mean underpricing of IPOs listed during that period was 99.2%. The age of the firm, the time lapse between issue and listing, and the number of times an issue was subscribed influenced underpricing. The study found that in the long-run firms do not underperform.

Yi (2001) studied the long-run performance of the newly public firms and found that listed IPOs underperformed in the first three years. The study found that IPOs underperformed when compared with market index and control firms' performance. The

study observed that firms that had positive pre-IPO earnings performed better than other IPOs. Yi concluded that investors were often too optimistic about future growth, and they exorbitantly valued the IPOs.

2.4 Motivation to go Public

Kim and Weisbach (2005) examined 16958 IPOs from 30 different countries from the year 1990 to 2003. The study aimed to understand whether firms go public to raise capital or not. They found that firms that went public had a significant correlation with the sale of issues and investment in capital expenditure and R&D. They also found that apart from investment, repayment of debt and increase in cash correlate with the IPO. They illustrated that the firms raise 79% of their capital through the sales in primary markets, and concluded that the motive to go for IPO was to raise capital.

Pagano, Panetta, and Zingales (1998) investigated the reasons for firms to go public. The study examined a total of 12528 Italian IPOs from the year 1982 to 1990. They analysed the determinants; ex-ante and ex-post of IPO, and compared them with private firms. They found that the proceeds raised through public issues were not used for financing the investment; rather they were used to rebalance theirs after high investment and growth. They observed that public issue was followed by raising credit at a low rate and high turnover.

Booth and Chua (1996) studied 2151 IPOs that went public from the year 1977 to 1988. The study attempted to explain underpricing and argued that firms go public to underprice their issues to promote oversubscription. The study also suggested that firms go public to achieve secondary market liquidity, and this was achieved through underpricing by increasing the demand for subscriptions.

Zingales (1995) looked at the role played by public issues in maximizing the value of control rights of promoters during the sale of firms. To investigate the effect, they designed a

model. The study postulated that retaining the insider ownership and sale of an issue to the dispersed owner has to strike an equilibrium. Zingales found that maximizing the proceeds through the public issue gave the insider owner bargaining power to sell the firm. They concluded that firms eventually go public to sell their businesses at optimum value.

Mello and Parsons (1998) developed a model to study how a different method of sale of shares helps in explaining the optimum ownership structure and revenue maximization. They found that cash out of investors was one of the motivations to go public. The public issue allowed investors to sell their stakes, thereby reducing the pricing issue of an IPO.

Black and Gilson (1998) looked at the consequences of path-dependency practice in stock market-based economies like the USA and bank-based economies like Germany and Japan with reference to the strong share market and venture capital investments. They showed that the entrepreneur and venture capitalist share a contract that induces the VC to hand over the control to the entrepreneur. They found that venture capitalists chose IPO as a primary exit strategy.

Bradley, Jordan, and Ritter (2003) examined 1611 IPOs whose lock-in period had expired. They found that analyst coverage has been initiated for the firms as soon as the lock-in period is expired. They also reported that most of them got a positive recommendation, i.e. 'strong-buy' after initiation of coverage. The abnormal returns for these firms are 4.1%. They concluded that abnormal returns of the IPOs forced the firms to get analyst coverage by adding investment bankers as co-managers of the underwriter syndicate.

Boehmer and Ljungqvist (2004) examined 330 private German firms that intended to go for IPO during the period from 1984 to 1995. The study aimed to test the various theories regarding the timing to go public, and to investigate why and when firms go public. Their model predicted that the likelihood of conducting an IPO increased with a firm's investment

opportunities and valuation. They also found that these effects are distinct from the determinants that influence a firm's demand for outside capital.

2.5 Post-IPO Acquisition

James C Brau and Fawcett (2006) in their study compared the theory and practice with regard to the motivation for firms to go public. They compared the theory and practice by conducting a survey on 336 Chief Finance Officers (CFOs). The sample was divided into three groups. The first group consisted of firms that completed the IPO process. The second group consisted of firms that had initiated the IPO process but withdrew it again. And the third group consisted of firms that were big enough to go public but they refrain themselves going public. The study findings showed that the primary motivation for most of the CFOs to go Public was for acquisition.

Celikyurt et al. (2010) in their study investigated the motivation of firms to go public. They analysed IPO firms' activities from 1985 to 2004. They found that 36% of the firms went for acquisition in their first year of public offering. And 77% of the firms went for acquisitions within five years of the public offering. They also found that IPO firms that were highly underpriced go for stock-based acquisitions. They further found that IPO firms invested highly in mergers and acquisitions rather than in CAPEX and R &D. They concluded that the salient motivation to go Public was for acquisition.

Wiggenhorn et al. (2007) in their study assumed that IPO firms had unique characteristics which motivated acquisition activity. In their study, they studied firms that went public from 1992 to 2001. The sample size of the study consisted of 5000 IPO firms out of which 400 IPO firms went for acquisition in the first year. They found that these IPO firms encountered favourable stock values to pursue their acquisition desire. They also found that

the new public firms mostly finance their acquisition by offering stocks to the target firms. And in the period of the internet bubble, the impact of valuation was less favourable.

Hovakimian and Hutton (2010) in their study argued that the primary motivation of firms motivation to go Public was to acquire. They observed that over one-third of the IPO firms were engaged in acquisition in the first year of listing itself. They found that IPO facilitated the acquisition process. IPO firms that recently received capital boost through IPOs had the resources at their disposal. Going public offered scope for public financing and stocks to be traded publically that functioned as acquisition currency. They also found that market feedback and overvalued stocks could facilitate the acquisition process.

Rau and Stouraitis (2011) in their study showed that corporate events have a pattern. To examine the pattern, they studied five corporate events: IPO, seasoned equity offering, cash, stock-based acquisition, and stock repurchase. They studied 151000 corporate transactions from 1980 to 2004. They found that the newly public firms wave was followed by the stock-based acquisition. This pattern was consistent for decades and with different industries. They concluded that their findings were in line with the neoclassical theory and misvaluation hypothesis.

Arikan and Capron (2010) examined the impact of pre-IPO affiliations on the performance of post-IPO acquisitions. The study illustrated that pre-IPO affiliations benefitted IPO firms by creating a positive perception in the investors. But on the other hand, pre-IPO affiliations also hinder the acquisition process when there was a conflict of interest. The study analyzed 717 IPO firms that made 4029 acquisitions. They found that firms affiliated with prestigious underwriters performed positively. However, when the underwriters also acted as acquisition advisors, the firms performed negatively. They also found that IPO firms associated with venture capitalists performed positively.

James C. Brau, Couch, and Sutton (2012) examined 3547 IPO firms in the US from 1985 to 2003 to study the impact of acquisition activity on the performance of the firms. These IPOs were indexed in SDC and CRSP databases. Out of 3547 IPOs, 1181 IPOs, which was about 33%, went for the acquisition of other firms within the first year of listing. They found that IPO firms that went acquisitions during the initial first year were performing negatively compared to non-acquiring IPO firms. They found that the 3-year mean stylized returns for the acquiring firms was -15.6% and for the non-acquirers was 5.6%.

Bessler and Zimmermann (2011) examined the acquisition activities of newly public firms as growth or exit strategies. They analysed 2679 European IPO firms listed from 1996 to 2010. They found that IPO acquirers performed better than non-acquiring firms. They observed that when a firm announced acquisition there were significant positive abnormal returns. They also found that the factors which influenced IPOs to transform into bidders or targets are external financing, growth, firm size, and institutional holding.

F. T. Mousa, Kim, Rutherford, Adcroft, and Wilson (2016) explored the influence of top management teams (TMT) on high-technology firms that are involved in takeovers after the IPO process. They studied 135 IPO firms to explore the relationship. They found that the experience of the top management team in serving on the board and in senior management positively influenced the acquisition activity of the IPO firms. They also found that TMT with longer tenure and prior IPO experience negatively influenced the acquisition activity.

Aktas, Andries, Croci, and Ozdakak (2019) in their study examined the financing role of IPOs in different markets across the globe. The study analyzed 900 IPO firms in Europe that were listed from 2002 to 2014. They found that for firms operating in developed financial markets, IPO served as a promising financing option for acquisitions. However, this was not the same for firms operating in emerging markets. They concluded that the purpose

of IPO financing varied for firms operating in different markets depending on the stock market development.

Anderson, Huang, and Torna (2017) in their study tried to understand whether IPO investors could predict acquisitions by utilizing available information. They found that the investors-based IPOs were able to predict whether a firm would evolve into a bidder or target. They found that the underwriter, promotion of IPO, pricing, proceeds, ownership structure, and market timing were essential elements in predicting merger and acquisition activity. They also found that investors rely on these elements to predict acquisition and merger activities. They concluded that the newly public firms have many implications on the future merger and acquisition activities and on their valuations.

Anderson and Huang (2017) investigated the variation in institutional investors' performance among the newly public firms involved in merger and acquisition activities. The study analysed 5226 IPOs that went public from 1985 to 2008. They found that there was a substantial performance difference between retail investors and institutional investors in the context of investing in newly public firms that were going for acquisitions. They concluded that high returns among the firms with high institutional investment indicated that institutional investors could anticipate acquisitions of newly public firms, and so they actively monitor IPO firms post-listing.

2.6 Acquisition Performance

Lang, Walkling, and Stulz (1989) in their study examined tender offer. They looked at 87 tender offers that were floated in the US. They found that firms with high Tobin's q value performed better than firms with low Tobin's q value. The stock performance of target firms with low 'q' value was better than that with high 'q' value. They conclude that the bidder's

with high Tobin's q are well-managed firms that can even manage the target firms with low Tobin's q .

Franks, Harris, and Titman (1991) in their study examined the performance of the share price of acquiring firms. They used the data of 399 IPO firms in the US engaged in takeovers from the year 1975 to 1982 for their analysis. They studied the acquisition performance of firms using multifactor benchmarks to overcome the mean-variance inefficiencies. They concluded that earlier studies reported the poor performance of the bidders due to benchmark errors rather than due to mispricing of the bidders.

Loughran and Vijh (1997) investigated the relationship between the bidders' performance, method of payment, and mode of acquisition. They analysed 947 acquisitions that happened from 1970 to 1989. They found that the five-year post-acquisition returns of the firms that went for stock purchases generated a loss of 25%. And firms that went for cash purchases generated positive excess returns of 61.7%. They also found that the overall bidders' performance in the long-run was negative.

Rau and Vermaelen (1998) in their study investigated the performance of the acquirer in the long run and the factors that influenced the acquirer's performance. They analysed over 3169 acquisitions and 348 tender offers in the US. They found that the long-run underperformance of acquirer firms was caused by the poor performance of the low book-to-market ratio of glamour firms. They conclude that acquirers overestimated the market and management in terms of post-acquisition performance while choosing targets.

Duggal and Millar (1999) studied the influence of institutional ownership on the acquirer's performance. They analysed acquisitions that were completed from 1985 to 1990 in the US. They found a positive relationship between acquisition performance and institutional ownership. They also found that institutional ownership was significantly

determined by a firm's size, insider ownership, and index in the S&P 500. However, the two-stage regression did not reveal any significant influence of institutional investors in a takeover. They concluded that institutional investors' presence in a firm was based on the firm's characteristics. Hence they did not find any conclusive evidence to corroborate institutional investor influence in takeovers.

Gregory (1997) analysed a comprehensive dataset of acquisitions by UK firms. He analysed the performance of acquirers that completed acquisitions from 1984 to 1992. He found that the mean abnormal returns of the firms in the first two years of post-acquisition were significantly negative. He also found that acquirers that were paying the targets by equity were highly underperforming than others. The study further observed that diversifying acquisitions are the poorest performing firms, and hostile bidders are performing better than recommended bidders.

Moeller, Schlingemann, and Stulz (2004) studied the influence of a firm's size on a bidder's performance. They have analysed 12023 acquisitions from 1980 to 2001. They observed a disparity in the announcement returns of acquirers among the bidders. They also found that firms with larger firm sizes have around two percent higher announcement returns than firms with smaller sizes. They concluded that the findings were significant, and the deal characteristics did not influence the returns over time.

Loderer and Martin (1992) examined the performance of acquirers in the US. They analysed a comprehensive number of acquisitions completed from 1966 to 1986 by firms listed on the NYSE and AMEX. They found that acquirer firms do not underperform after the first five years of acquisition. They also observed that some firms in the 1960s underperformed in the first three years. But the underperformance faded in the 1970s and

then vanished in the 1980s. They concluded that corporate acquisition does not provide evidence that acquisition was wasteful.

Arikan and Stulz (2016) examined two competing theories for corporate acquisitions: agency and neoclassical, on corporate acquisitions. They analysed the firms that completed acquisitions from 1975 to 2008. They found that younger firms were making related and diversifying acquisitions than mature firms. Their findings were consistent with neoclassical theory. They found that the acquiring firms performed positively had good growth opportunities, and were going for wealth-creating acquisitions by acquiring non-public firms. Their findings were also consistent with agency theory. They found that mature firms generated negative returns when they acquired public firms.

Conclusion

This chapter has presented a systematic literature survey on detailed background on IPOs, IPO performance in the short-run and long run, post-IPO acquisitions, and acquisitions in general. It started with a brief introduction to the chapter, which explained the structure of the flow of this chapter. It was followed by relevant background to the Initial Public Offer, which pointed out the importance of IPO in promoting entrepreneurship. This section emphasized on the prominence of the prospectus and earlier literature on IPO. The subsequent section discusses the IPO performance both in the short-run and long-run. Previous literature has shown that the IPO's performance is poor in both short-run and long-run, it explains the various determinants which affect the performance of IPO; they are venture capital, underwriter, and other determinants. The later section explains the different motivations to go public. The literature explains the motivation to go public is to raise capital for their future expansion, to get analyst coverage, to rebalance capital structure, to take advantage of market mis-valuation, to get access to capital markets, and to become the

acquisition target. However, later studies have shown underlying motivation to go public is acquisition. The next section explains the literature on post-IPO acquisitions, which corroborates that the primary motivation to go public is to acquire various studies. Studies have unravelled that the subsequent stock performance of IPO acquirers showed mixed findings, some studies show that the subsequent stock performance is negative, and contrasting findings are reported that the stock performance is positive. Various determinants impact the performance of IPO acquirer stock performance. The last section discusses the acquirer's performance in general. The acquirer's performance has contrasting findings. Some Studies found that the acquirer's performance is negative, while others found that the acquirers are performing positively, which means acquiring firms are making value-enhancing acquisitions.

2.7 Research Gap

The survey of literature provided a concise overview of the short-run and long-run performance of IPOs after listing on the stock exchange. Previous studies have identified several determinants that affect the performance of IPOs. However, most of the studies have ignored the post-IPO evolution of firms that impact the performance of businesses in the long-run. Research studies have suggested that new public firms are prolific acquirers (James C Brau & Fawcett, 2006; Gao, Ritter, & Zhu, 2013; Hovakimian & Hutton, 2010; Hsieh, Lyandres, & Zhdanov, 2011; F. T. Mousa et al., 2016). However, there have been only a few studies that looked at the relationship between acquisition and long-run performance in India (Bessler & Zimmermann, 2011; James C. Brau et al., 2012). The studies on acquisition suggest that mergers and acquisitions bring about structural changes in a firm which will impact the performance of the acquirer.

The present study tries to address the impact of the desire to acquire on the long-run stock and operating performance of the IPO, and also compare the investment choices between the IPO acquirer and non-acquirer firms.

2.7.1 Research Questions

The review of existing literature showed that there are only a few studies that have explored the impact of IPO acquisitions on the firms' performance. Likewise, few scholars have compared the performance of IPO acquirers and non-acquirers. This study seeks to examine the influence of acquisition activity on the operation performance of IPO acquiring firms. From the above review of literature, it can be inferred that a firm's investment choice has a great influence on its performance. However, there are only a few studies that have explored the investment choices of IPO acquiring and non-acquiring firms. Drawing on the research gap highlighted, this study has developed the following research questions :

1. Does the IPO firm's acquisition activity influences the stock performance of the IPO acquiring firm?
2. Does IPO grading influence the performance of graded and non-graded acquirers?
3. Does the IPO firm's acquisition activity influences the operating performance of the IPO acquiring firm?
4. Does the IPO acquisition activity influences the investment choice of the IPO acquirer firm?

2.7.2 Objectives of the Study

The objective of the study is to look at the impact of acquisition activity on the performance of the IPO acquirer. The broad objective is to study the impact of the acquisition activity of an IPO firm on the IPO firm's performance. The study has two broad objectives. One, to study the stock performance of the IPO and the operating performance of the IPO.

Two, to study the impact of the acquisition activity on the investment choices of the IPO. The other objective includes:

1. To study the influence of the IPO firm's acquisition activity on acquirer firm's long-run stock performance.
2. To study the influence of IPO grading on the IPO acquirer's long-run performance.
3. To examine the influence of an IPO firm's acquisition activity on the IPO acquirer's long-run operating performance.
4. To understand the impact of an IPO firm's acquisition activity on the investment choice of IPO acquirer firm.

2.7.3 Scope and Limitations of the Study

The present study looks at the IPOs as the medium for capital raising. Other mediums like FPO, rights issue, or private placement are not considered in this study. The scope of the study is restricted to the IPO data covered in the prime database. Other IPO data floated during the sample years are not covered for the study. To obtain the financial information of the IPO firms, the study retrieved data from CMIE prowess IQ. The firms that are listed only with prowess IQ are considered for the study. The study has dropped firms whose financial information was inadequate and unavailable in the prowess IQ. The study is restricted to the prowess IQ database for mergers and acquisitions-related information. The firms whose data were not available were dropped from the study. Finally, the scope of the study is restricted to the IPOs which are floated on the Indian stock exchange to address the research gap.

2.7.4 Development of the Research Hypothesis

Objective 1

New public firms in their quest to grow rapidly undertake acquisitions. Firms that seek to go through massive structural changes to evolve themselves as public firms will

engage in acquisitions that would have a significant impact on their performances. The findings of acquisition studies are divided about the influence of acquisition on the performance of the acquiring firm. Baker, Pan, and Wurgler (2012) noted that entrepreneurs are susceptible to overconfidence or hubris (Camerer & Lovallo, 1999; Cooper, Woo, & Dunkelberg, 1988). The hubris-stricken managers end up overestimating the synergistic benefits (Roll, 1986). Research studies have also found that acquisition negatively impacts the acquirer's performance (Gregory, 1997; Loughran & Vijh, 1997; Moeller et al., 2004). However, some studies have shown that acquisition has a positive impact on the acquirer's performance (Arikan & Stulz, 2016; Loderer & Martin, 1992). The study draws the following hypothesis:

H_{1a}: The long-run performance of IPO and IPO acquirer differs significantly

H_{1b}: IPO firm acquisition activity significantly impacts the long-run stock performance of the IPO acquirer firm.

Objective 2

IPO grading or rating significantly influences the performance of an IPO firm (Deb & Marisetty, 2010). The grading of an IPO is based on the fundamentals of a firm which are the size of the firm, competitiveness, and governance. The certification of the IPO quality subsequently influences the performance of the firm after listing (Carter, Dark, & Singh, 1998; Krishnan, Ivanov, Masulis, & Singh, 2011). IPO is graded from 1 to 5. Grade 5 has the best fundamentals, and grade 1 has the lowest. High-graded IPOs are graded four and above, and the rest are low-graded. The study draws the following hypothesis based on the above explanation:

H₂: IPO grading positively influences the long-run stock performance of the IPO acquirer firm.

Objective 3

Acquirers make value-increasing acquisitions by exploiting underutilized assets, thereby generating positive returns (Arikan & Stulz, 2016). Managers engage in value-enhancing acquisitions where synergistic benefits can be reaped. The synergy produced translates into operating performance. Many studies have shown that acquisition firms engage in wealth-increasing acquisitions (Heron & Lie, 2002; Linn & Switzer, 2001). Studies in Asia have also revealed that acquirers engage in value-enhancing acquisitions, and they generate significant positive operating performance (Yeh & Hoshino, 2002). The study draws the following hypothesis from the explanation:

H₃: The IPO firm's acquisition activity positively influences the operating performance of the IPO acquirer.

Objective 4

The acquisition of a target firm requires a lot of resource consideration on the part of the acquirer firm. Among all other resources, financial resources must be used most judiciously. Since new public firms are funded by institutional investors, financing acquisitions is not challenging. However, mobilising the funds for capital expenditure, and research and development become a challenging job to run the growth and expansion process. Non-acquiring IPO firms mostly engage in growth and expansion in order to stay relevant and compete in the marketplace. And non-acquiring IPO firms that raised capital recently can finance their growth process. The study hypothesises the following hypothesis:

H₄: IPO acquirer firms invest significantly less in CapEx than non-acquiring IPO firms.

Conclusion

This chapter provides a review and survey of the literature on IPOs, the performance of IPOs in the short-run and long-run, and the acquisition activities of post-IPO firms. The review highlighted the importance of prospectus for IPO and public offering to promote entrepreneurship. It also reflected that the performance of IPO in the short-run and long-run is determined by determinants such as venture capital, underwriter, and other determinants. The chapter further looked at the rationale and motivation behind the firms to go public. The reasons identified are to raise capital for future expansion, to get analyst coverage, to rebalance capital structure, to take advantage of market mis-valuation, to get access to capital markets, and for acquisition.

CHAPTER 3

3 Research Methodology

This chapter discusses the research methodology, variables, and tools used in the study to analyse the data. It will also furnish the problem statement of the study and the significance of studying it.

3.1 Type of Research

The study is analytical in nature. In an analytical study, the study uses existing information to evaluate and analyse the research (Kothari, 2004, p. 2). Here secondary data are used for the analysis of the data.

3.2 Research Design

The study uses a cross-sectional research design. A cross-sectional research design uses data that are collected at one point across the sample firms. Different variable data are collected across the sample firms.

3.2.1 Type of Data

The study uses secondary data for the analysis. Secondary data are the information collected for specific purposes, such as financial statements that are published to communicate the firm's performance to the stakeholders.

3.2.2 Sources of Data

The study primarily collected data from 'prowess iq' and 'prime' databases. Prowess iq is the largest database which consists of around forty-seven thousand firms that are both public and private firms. It is the most extensive database in India for financial information. All the financial variable data and merger data have been collected from the prowess iq database. Prime database has extensive data on IPOs that were floated in India. It consists of every data related to the IPO and has information got every aspect of an issue.

Table 3.1 List of Variables and their Respective Proxies

Variable	Proxy	Literature support
I. Dependent variables		
1. Long-run stock performance(1 st year)	Buy-Hold returns (BHR)	Barber and Lyon (1997); Deb and Marisetty (2010)
2. Long-run stock performance (2 nd year)		
3. Long-run stock performance (3 rd year)		
4. Long-run operating performance(1 st year)	Profit before interest, tax, depreciation and amortisation scaled to total assets	Bharat A. Jain and Omesh Kini (1994)
5. Long-run operating performance (2 nd year)		
6. Long-run operating performance (3 rd year)		
7. Capital expenditure intensity	Capex scaled to total asset	
II. Independent variables		
1. Acquisition dummy	dummy variable (0-no acquisition, 1- acquisition)	Celikyurt et al. (2010); Wiggenhorn et al. (2007)
III. Control variables		
1. Qualified Institutional Buyer Subscription	QIB Subscription	Khurshed, Pande, and Singh (2010), (Kaustia & Knüpfer, 2008)
2. Issue size	Issue Size	(Bansal & Khanna, 2012), (Ghosh, 2005a), (Gu, 2003)
3. Total Subscription (Time Subscribe)	Total Subscription	(Khurshed et al., 2010), (Koh & Walter, 1989; Menyah, Paudyal, & Inyangete, 1995)
4. Post-IPO promoter holding	Percentage of shares held by the promoters	(Alavi, Pham, & Pham, 2008)
5. Age of IPO firm	AGE FIRM	(Chahine & Filatotchev, 2008), (Jay R Ritter, 1984)
6. Return on Net Worth	RONW	(Murthy & Singh, 2014), (Deb & Marisetty, 2010)
7. Underpricing		(Sohail & Nasr, 2007), (Miller & Reilly, 1987), (Jay R Ritter, 1987), (Randolph P

		Beatty & Jay R Ritter, 1986; Rock, 1986)
8. Issue expense	Issue expense	(Alavi et al., 2008), (Deb & Marisetty, 2010)
9. Grading dummy	Dummy variable (1- four and above grade IPOs, 0- three and below grade IPOs)	(Deb & Marisetty, 2010)
10. Earning per share		(Kao, Wu, & Yang, 2009)

The variables in the study are divided into three: dependent, independent, and control. The dependent variables are the long-run returns of the 1st year, 2nd year, and 3rd year. The independent variable is the acquisition dummy. Control variables are variables that control.

Long-Run Performance

The long-run performance is the return generated for investors by holding the IPO firm's stock from the closing price on the listing day to the end of the first three years of listing. The study defines a year not according to the annual calendar system rather it defines the 252 trading days as a year. To calculate the long-run stock returns the study uses BHR (Buy Hold Returns) model.

Equation 3-1 Calculates the Returns of the IPO firm 'i' for First Three Years of Listing

$$BHR_{0,3}^i = (r_{t=0,3}^i - r_{lst\ cls\ pr}^i)$$

In the equation 3.1, BHR^i is the Buy Hold Returns of the particular IPO stock 'i' which is the market adjusted returns for first three years, and 'r' is the returns of the particular stock calculated by the difference of listing day's closing price and closing price after the first three years.

Equation 3-2 Calculates the Returns of the IPO Firm ‘i’ after First Year, where 252 Trading Days is Considered as the One Year Period.

$$BHR_1^i = (r_{t=1}^i - r_{lst\ cls\ pr}^i)$$

While calculating the returns of the subsequent years, the closing price of the stock at the end of two years is deducted from the listing day closing price.

Equation 3-3 Calculates the Returns of the IPO Firm ‘i’ after Second Year, where 504 Trading Days is Considered as the One Year Period.

$$BHR_2^i = (r_{t=2}^i - r_{lst\ cls\ pr}^i)$$

Similarly, for the third year, the closing price of the stock at the end of three years is deducted from the listing day closing price.

Equation 3-4 Calculates the Returns of the IPO Firm ‘i’ after ThirdYear, where 756 Trading Days is Considered as the One Year Period

$$BHR_3^i = (r_{t=3}^i - r_{lst\ cls\ pr}^i)$$

Long-Run Operating Performance

The long-run operating performance is the returns generated by the new public firm subsequently in the first three years after listing through operations. Operating performance is a prominent measure to know how well a firm’s operations cover expenses and generate profit. Operating performance is calculated from the profit before income, tax, depreciation, and amortisation (PBITDA) scaled to total assets (TA). Scaling the operating income with total assets helps in standardising the different IPO firms for comparison with each other. Operating profit data is collected from the CMIE prowess iq database. Operating income data is extracted from the annual report that is reported at the end of every financial year, i.e. the 31st March. The newly public firm, that was listed for less than or equal to nine months of the

financial year, is considered as the first-year or the subsequent financial year closing is considered as the first year.

Equation 3-5 Calculates the Operating Performance of the Firm.

$$\text{Operating performance} = \frac{\text{Profit Before Income, Tax, Depreciation and Amortisation (PBITDA)}}{\text{Total Assets (TA)}}$$

Capital Expenditure(CapEx) Intensity

Capital expenditure is the investment made in assets or projects for the expansion or growth of a firm. A firm invests in CapEx to grow organically or internally. When a firm experiences a huge demand for the product, the firm invests in fixed assets in order to meet the demand. CapEx is a proxy for growth prospects for a firm. It also depicts the long-term prospects of a firm and helps in competing in the marketplace. The intensity of CapEx is a measure of the firm commitment to grow and expand in the future. The intensity of CapEx is calculated by dividing it by total assets.

Equation 3-6 Calculates the Capital Expenditure Intensity

$$\text{CapEx intensity} = \frac{\text{PP\&E(current)} - \text{PP\&E(prior)} + \text{depreciation}}{\text{total assets}}$$

Acquisition Dummy

The dummy variable signifies IPO companies that participated in acquisitions within three years of being listed on the stock market.. A dummy variable is used in regression analysis. The value of the dummy variable is 0 and 1 and they are used to ascertain the effect of categorical variables. In this context, the firms that went for acquisitions within three years is taken as ‘1’ and the firms that did not as ‘0’.

Qualified Institution Buyer(QIB) Subscription

In the Indian IPO process, investors are grouped into qualified institutional investors, high net worth investors, and retail individual investors, based on the minimum amount of investment requirement. The allotment of IPOs to QIBs is 35% according to the guidelines of SEBI. QIB subscription is the times institutional investors subscribed to an IPO. It indicates the demand for IPOs by institutional investors.

Post-IPO Promoter Holding

The firms that float public issues are most cases newly established firms. The entrepreneurs who established the firms play a prominent role in the growth of the firms. When a firm goes public, the dilution of ownership of the initial promoters or entrepreneurs is imminent. Therefore, the holding of the promoters after the public issue should be significant in order to take the major decisions.

Age of the Firm

The age of a firm is the number of years that elapsed from the time of establishment to the time of floating the public issue. It is an indicator for evaluating the success of a firm after going public. The higher the age of a firm, the more experience it has gained in the marketplace. Organisations also learn like human individuals with age (Yeo, 2003). Experience is instrumental in solving complex issues. An inexperienced firm will not have much exposure to deal with the complex organisational issues.

Pre-IPO Return of Networth

RONW shows the profitability of a firm in percentage. The profit is calculated by dividing the overall profit of a firm by the existing investment of the shareholders of the firm. The RONW profit data is provided in the “red herring prospectus”. The information on RONW was gathered from the prime database. The latest information preceding opening up

to the public issue has been utilised to clarify its impact on the listing day return and subscription level of the retail investor. Murthy and Singh (2014) used RONW as an independent variable to anticipate short-run abundant gains. They also presumed that return on total assets adversely impacted short-run performance. Deb and Marisetty (2010) examined the impact of RONW on RII subscriptions and reported that there was no significant impact in anticipating subscriptions.

Underpricing

Underpricing is the difference between the listing day closing price and the offer price. (Jay R Ritter, 1987) defined underpricing as “the outcome of the difference between IPO listing day closing price and offer price has been taken as the listing day return.” Listing day return or underpricing is also known as the ‘money left on the table’ as a firm underprices an issue to compensate the risk borne by the investors. Studies have shown that IPOs of small firms are highly underpriced than those of large firms (Chalk & Peavy III, 1987; M. R. Ibbotson & Mark, 1994).

Equation 3-7 Calculates the underpricing of IPO firm

$$\text{Underpricing} = \text{listing day closing price} - \text{offer price}$$

Group Company

Group companies are firms that are part of diversified business groups. Diversified business groups have been in the business for a long time, and they have gained credibility among the vendors and investors. This credibility and experience gained by the group company are used to emulate the same economies for the standalone firms. The firms associated with the group company can utilise internal institutions to mitigate external risks (Khanna & Palepu, 2000). The group affiliation of the IPO firms influences the performance of the IPOs negatively (Marisetty & Subrahmanyam, 2010).

Issue Expense

Issue expense is the direct expense incurred by an IPO firm while floating the issue. The direct expense includes investment banker commissions, legal fees, and promotion expenses to float an IPO. A public issue also incurs indirect expenses such as ‘money left on the table’ or underpricing. However, for the purpose of this study, only direct expenses are taken into account.

Grading Dummy

IPO grading is the rating of firms based on their fundamentals. It was introduced in the Indian IPO market by SEBI to reduce information asymmetry. IPO firms are graded from 1 to 5. Firms with 5 points have strong fundamentals, and firms with one have weak fundamentals. A dummy variable is assigned for the graded IPOs. The dummy value ‘1’ is assigned for graded IPOs with four and above, and 0 for other IPOs. Grading reduces listing day returns and increases the demand for the IPO (Deb & Marisetty, 2010).

Earnings Per Share(EPS)

Earning Per Share is the amount of profit earned on each share of the organisation. It demonstrates the degree of profit and productivity of any organisation. Data for EPS was collected from the prime database. The latest information preceding the opening up to the Public of the firm had been utilised for the investigation. Chen and Hambrick (1995) used EPS for deciding the listing day return of new issues.

3.2.3 Tools and Techniques used for the Analysis of Data

For the analysis of data, the study employed Buy Hold Returns (BHR) to calculate the long-run stock returns of the new public firms. The long-run performance of an IPO firm is calculated for the first, second, and third years. The study employed (Barber & Lyon, 1997)

methodology to calculate the long-run performance of IPO firms. To study the long-run operating performance, the variables: profit before interest, tax, depreciation, and amortisation scaled to the total assets are employed to analyse the IPO firms' operating performance. To compare the investment choices made by the IPO acquirer firm and non-acquirer firm, Capital Expenditure(CapEx) and R&D expenditure, both scaled to total assets, are employed for the study. The study also used multiple regression models to determine the impact of acquisition activity on the long-run stock and operating performance of IPO firms for the first three years. Multiple regression models include control variables such as qualified institutional buyer subscription, issue size, total subscription (Times Subscribed), post-IPO promoter holding, age of IPO firm, return on net worth, underpricing, group company, issue expense, grading dummy, and earning per share. The software tools employed for the study are MS Excel 2010 and IBM SPSS 20 to analyse the data. MS Excel is used to arrive at the long-run stock performance using the BHR model. SPSS is used for multiple regression models.

3.2.4 Sample

The sample consists of firms that went public from 1995 to 2016. It includes the IPO firms that went for acquisition within three years of listing on the stock exchange were collected. The acquisition data consisted of IPO firms that were engaged in acquisition from 1995 to 2019. The IPO firms whose issue sizes were more than ten crores were considered for analysis. In cases where firms were delisted from the exchange within three years, the last reported price for any of the years was considered. During the sample years, SEBI introduced the grading of IPOs. To know the impact of the grading on the performance of the firms, a separate study has been conducted on the firms listed from 2007 to 2014. The overall sample size came down to 511 IPO firms for the analysis.

CHAPTER 4

4 Results and findings

4.1 Introduction

This chapter analyses and discusses the data of the study. It is divided into four sections. The first section deals with the descriptive statistics of IPO data. The descriptive statistics of IPOs deal with the overall outlook of the sample data. Descriptive statistics describe the distribution of IPOs in the sample years. The statistics also describe the distribution of IPO acquirer and non-acquirer firms. The descriptive statistics also depict the overview of the mean buy-hold returns of the overall IPO firms and the IPO acquirer and non-acquirer firms. The second section deals with the multivariate analysis of the IPO firms. The multivariate regression analysis is done on the buy-hold returns with the explanatory variable and in the presence of the control variable. In the third section, multiple regression analysis has been conducted to assess the operational performance of firms that have recently undergone initial public offerings (IPOs). And the final section deals with of the impact of acquisition activity on the investment choices of newly public firms.

4.1.1 Descriptive analysis

Descriptive statistics of independent and dependent variables are reported in year-wise order. The year-wise frequency of IPOs acquirer and non-acquirer frequency are reported. The study has taken the mean stock performance of the overall IPOs acquirer and non-acquirer for three years. The year-wise operating performance of the overall IPOs and the breakup performance of IPO acquirers and non-acquirer have been discussed in the following paragraph. To analyse the data, the study used buy-hold returns, operating performance, and capital expenditure intensity to answer the research questions. In addition,

multiple regression models are used to show the influence of acquisition activity on the performance of the IPOs.

4.1.2 Descriptive statistics

Figure 4.1 depicts the year-wise floating of the IPOs from 1995 to 2019. It can be inferred that the number of IPO firms was not consistent in terms of listings during the sample years. The lowest number of IPOs listed was in 1992, and the highest was in 2006. The number of firms opting for IPOs depends on the market conditions (Jay R Ritter, 1984), and the same is reflected in the study. In the initial years following the liberalisation of the Indian economy, the market suffered from stock market frauds and ‘fly by night entrepreneurs’. This led retail investors to doubt the reliability of the market. As a result, the first half of the 1990s witnessed the lowest number of IPOs listed in the market. The stock markets around the world boomed from 2005 to 2007. A similar trend was witnessed in India during 2006 and 2007 as the stock market recorded the highest number of IPOs listed in the market. But subsequently, due to the recession and the global economic downturn, companies hesitated from floating IPOs during 2008 and 2009, and this period noted a sudden fall in the listing. In the year 2013, the primary market recorded the lowest number of IPOs listed on the stock exchange.

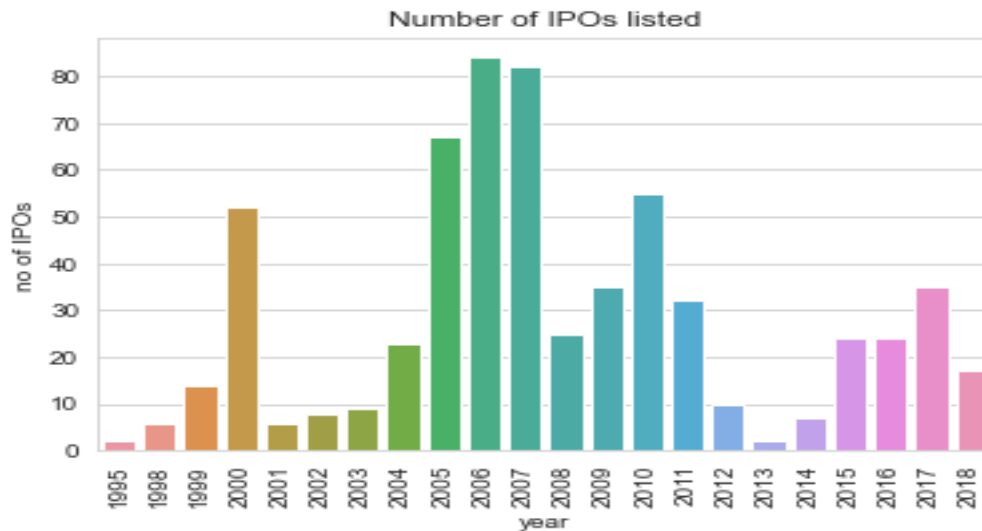


Figure 4.1 Year-Wise Frequency of the IPOs to be Listed in the Stock Market from 1995 To 2018.

Table 4.1 shows the year-wise breakup of IPO acquirer, IPO non-acquirer, and the overall IPOs in the sample period. The initial years from 1995 to 1998 did not record any acquisition activity by any new public firms. But subsequently, over the years, new public firms started to engage in acquisition activity, except in 2003. Almost 30% of the new public firms were engaged in acquisition activity during this period. This trend of engaging in acquisition activity subsequently after the listing is similar across all the markets (James C. Brau et al., 2012; James C Brau & Fawcett, 2006; Krishnakumar & Sethi, 2016; Wiggenghorn et al., 2007). The rise and fall of acquisition activity is dependent on the optimism prevailing in the stock market (Anderson et al., 2017).

Table 4.1 Year-Wise Break-up of the Acquirer, Non-Acquirer and Total Number of IPOs Listed

		Non-acquirer	Acquirer	No. of IPOs
Year	1995	2	0	2
	1998	6	0	6
	1999	13	1	14
	2000	44	8	52
	2001	5	1	6
	2002	6	2	8
	2003	9	0	9
	2004	13	10	23

	2005	39	28	67
	2006	56	28	84
	2007	57	25	82
	2008	21	4	25
	2009	26	9	35
	2010	46	9	55
	2011	24	8	32
	2012	7	3	10
	2013	1	1	2
	2014	5	2	7
	2015	11	13	24
	2016	14	10	24
	2017	23	12	35
	2018	15	2	17
Total		443	176	618

Figure 4.2 depicts the year-wise acquisition activity of the IPOs from 1995 to 2018. There are crest and trough movements both in listed IPOs and their acquisition activities. Table 4.1 shows the acquisition activity of IPO firms for three years from listing, more than 30% of the IPOs are acquiring other firms. The acquisition activity, as discussed, depends on the optimism of the investors in the stock market. The data for the years 2004, 2005, 2006, and 2007 shows that more than 50% of the listed IPOs went for acquisitions within three years. The highest number of IPOs that went for acquisition within three years was in 2004, yet only a few IPOs got listed. Later years witnessed a surge in the number of IPOs to be listed in the stock market. The highest number of IPOs listed were recorded from 2005 to 2008. In 1998 and 2003, the acquisition activity of the new public firms was zero.

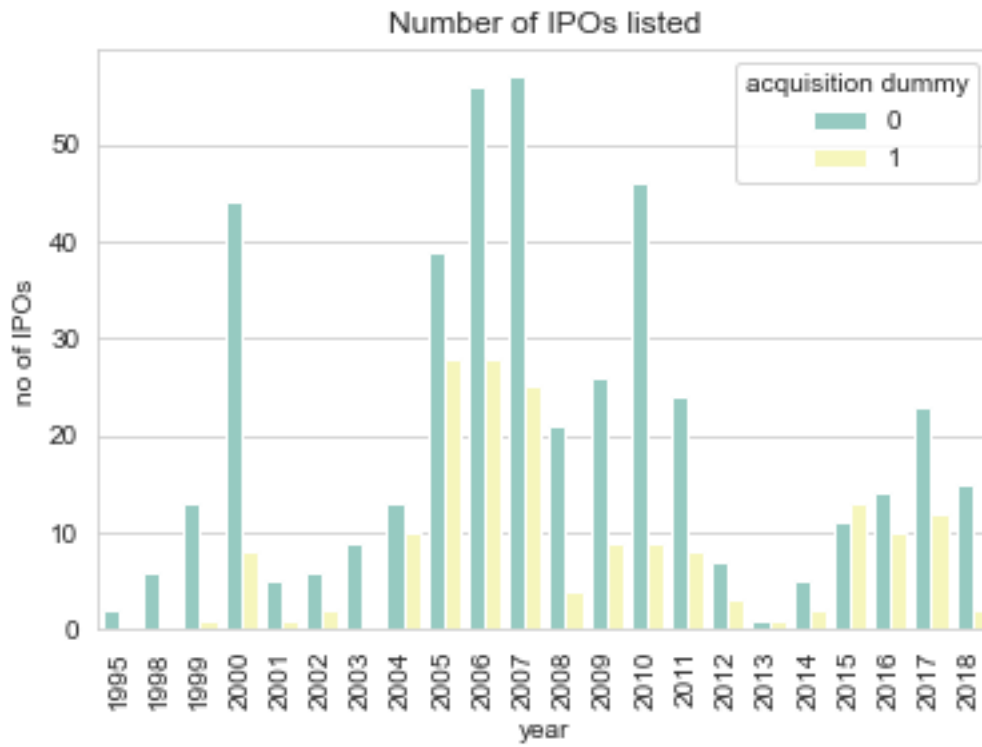


Figure 4.2 Year-Wise Acquisition Activity of IPOs from 1995 To 2018

Section I

This section seeks to achieve objective one. It studies the influence of IPO firms' acquisition activity on the IPO acquirer's long-run stock performance.

4.1.2.1 Long-run stock performance of IPOs

New public firms' long-run stock performance is measured using buy-hold returns (BHR) models for the three years subsequent to the listing of the IPOs. The long-run performance of the IPOs firms is negative subsequently after listing. Several studies have reported that new public firms underperform in the long-run (Jay R Ritter, 1991). A similar trend has been reported in the Indian scenario that long-run performance tends to be negative (Deb & Marisetty, 2010). The average long-run stock performance is on similar lines, the results of the study show that long-run performance is negative.

Figure 4.3 shows the distribution of long-run stock performance of new public firms after the first year. The distribution plots depict both kernel distribution and normal distribution. Both distributions in the plots show that the mean first-year stock performance of newly public firms is negative. The buy-hold returns are plotted on the x-axis. Similarly, the second-year long-run stock performance of IPO firms is also negative, as shown in Figure 4.4. The underperformance of IPOs is exhibited in the first two years of the listing, as depicted in Figures 4.2 and 4.3. Contrarily, the average stock performance of newly listed companies experiences a modest recovery in the third year, showing a positive trend.. This is shown in Figure 4.5.

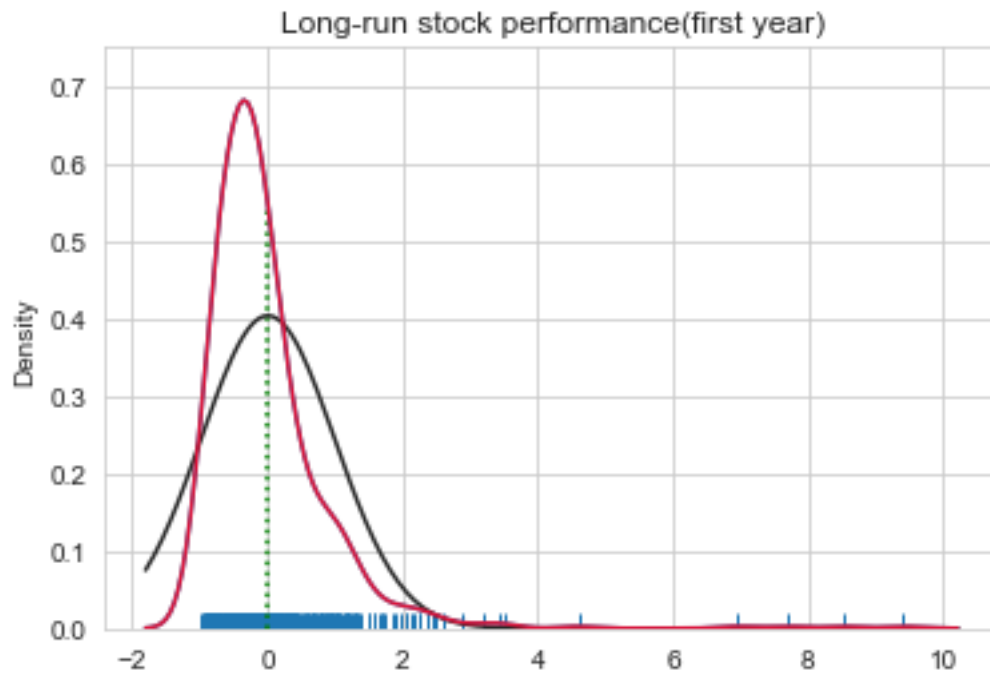


Figure 4.3 Long-Run First Year Stock Performance of IPO Firms.

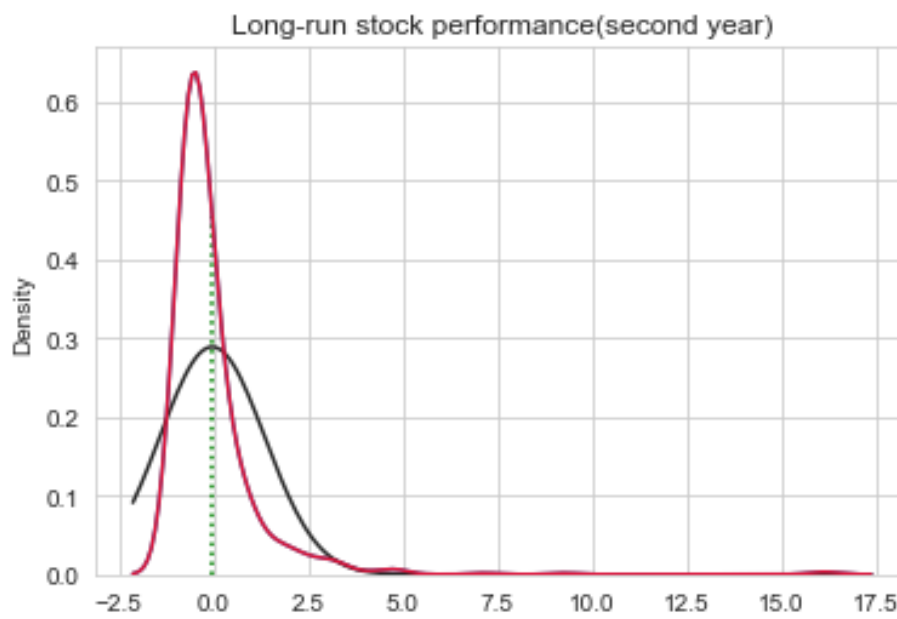


Figure 4.4 Long-Run Second-Year Stock Performance of IPO Firms. .

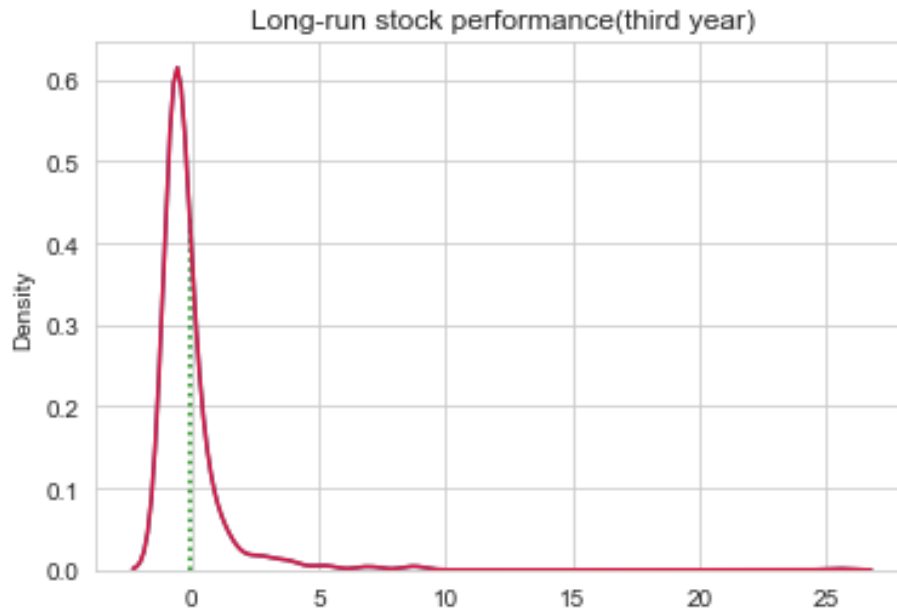


Figure 4.5 Long-Run Third-Year Stock Performance of IPO Firms. .

4.1.2.2 Heat map of IPO firms

Figure 4.6 depicts the heatmap of newly public firms' long-run performance in the first year. The individual rectangle in the heat map depicts the performance of newly public firms' returns. It shows that a large number of firms underperform. The performance of a significant number of newly public firms is zero or negative after the first year of listing. It can thus be concluded that the number of new public firms outperforming the market returns is fewer in the first year.

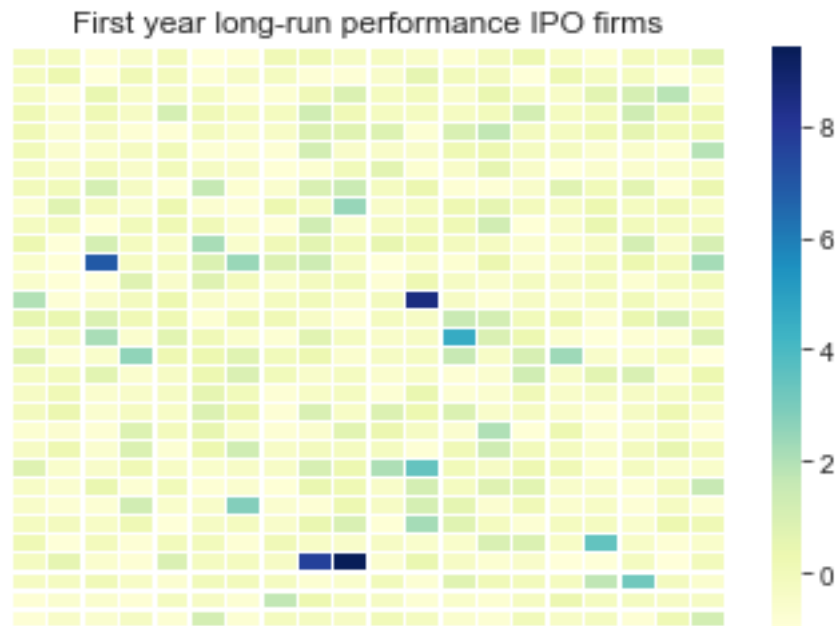


Figure 4.6 Long-Run Performance Heat Map Of New Public Firms in the First Year

Figure 4.7 depicts the long-run returns of the new public firms in the second year. As discussed above, each rectangle represents the performance of each IPO firm in the second year. The heat map depicts that a large number of IPO firms underperform subsequently after two years of listing. A significant number of firms' performance is negative. The second-year returns are relatively less than the first year. As shown in Figure 4.4, the mean of the second-year returns is hovering around zero.

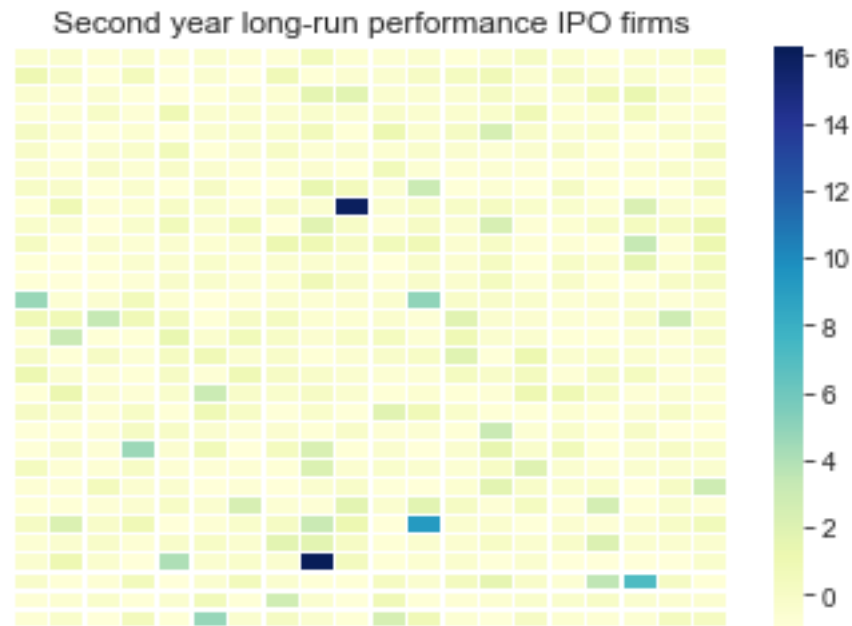


Figure 4.7 Long-Run Performance Heat Map Of New Public Firms in the Second Year

Figure 4.8 depicts the long-run returns of the new public firms in the third year. As already discussed above, each rectangle represents the third-year returns of IPO firms. The heat map depicts that a large number of IPO firms recover and their underperformance tends to fade in the third year after listing. The third-year returns of the new public firms were around zero. As shown in Figure 4.5, the mean three-year return of the IPO firms is zero.

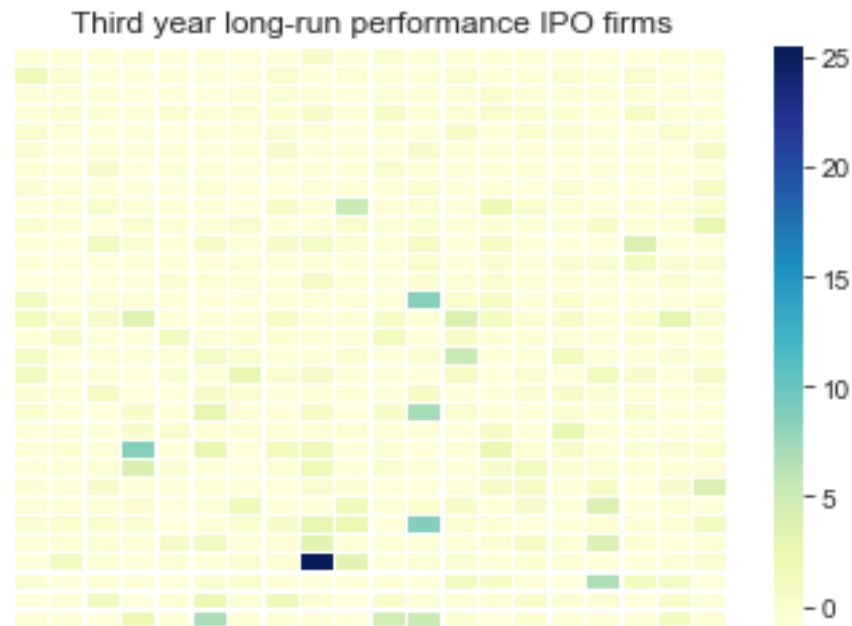


Figure 4.8 Long-Run Performance Heat Map Of New Public Firms in the Third Year

Table 4.2 reports the mean and median performance of the new public firms after listing. The table reports the performance for three years. It can be seen that the mean and median returns of IPO firms in the first year as negative. But the performance of the firms has enormous variation. The mean and median have modest differences in their performance.

Table 4.2 IPOs firms' Mean and Median Returns of Three subsequent Years after Listing.

	Mean BHR returns	Median BHR returns
IPO first-year	-0.09728	-0.28043
IPO second-year	-0.3984	-0.54639
IPO third-year	1.822827	-0.42472

4.1.2.3 IPO Non-Acquirer Firm Performance

Figure 4.9 shows the long-run stock performance distribution of IPO non-acquirer firms in the first year. Here both kernel and normal distribution are shown. The vertical green line depicts the mean performance of the IPO non-acquirer firm. The mean first-year long-run performance is below zero, which means that the IPO non-acquirer performance, in the long run, is negative.

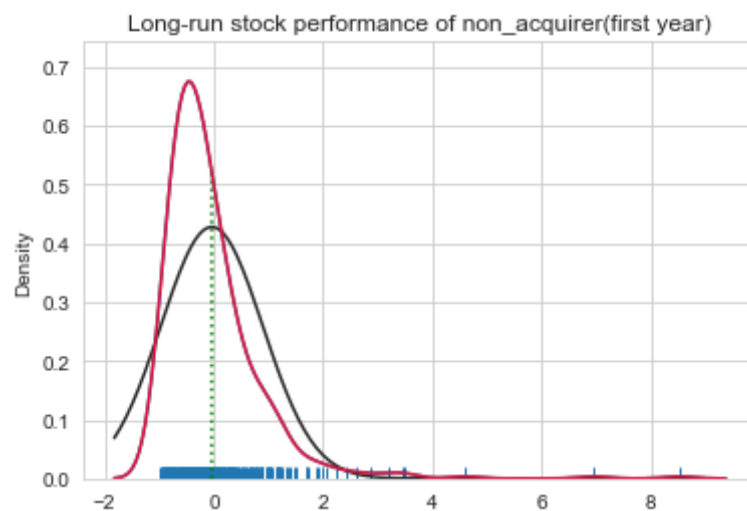


Figure 4.9 Long-Run Performance of IPO Non-Acquirer Firms in the First Year

Figure 4.10 shows the long-run stock performance of the IPO non-acquirer firms in the second year. The dotted line depicts the mean performance of the IPO non-acquirer. The mean performance of IPO non-acquirer after two years of listing is negative. And the overall performance of the IPOs after a listing was negative. Similarly, the IPO non-acquirer is also negative.

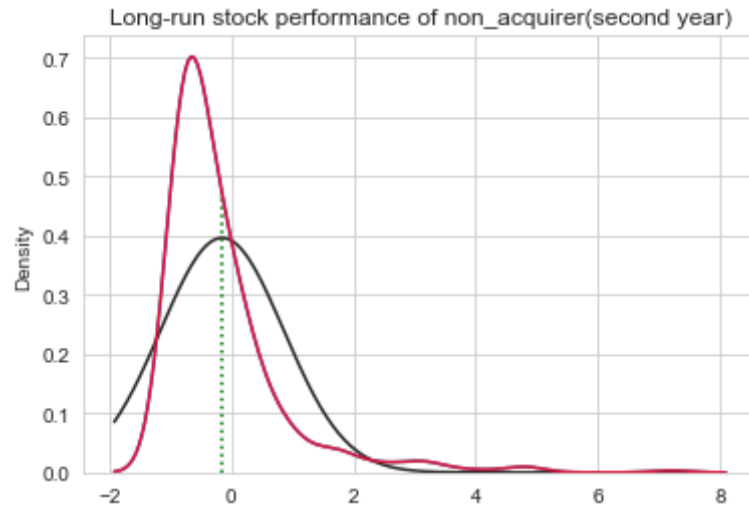


Figure 4.10 Long-Run Performance of IPO Non-Acquirer Firms in the Second Year

Figure 4.11 shows the kernel and normal distribution of IPO non-acquirer firms in the third year. The dotted line in the figure depicts the mean performance of the IPO non-acquirer firms after three years of listing. It shows that the mean performance of the IPO non-acquirer firms after three years of listing is negative. The underperformance of the IPO non-acquirer firm after three years is slightly negative, which contrasts with the overall IPO performance, which is non-negative.

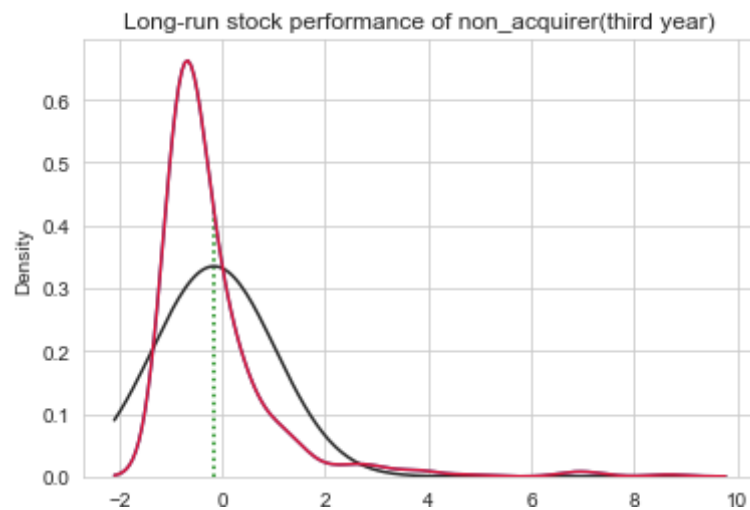


Figure 4.11 Kernel and Normal Distribution of the IPO Non-Acquirer Firms after Three Years of Listing.

4.1.2.4 Heat Map Chart of the IPO Non-Acquirer Stock Performance

The charts provide the distribution of the overall sample, whereas the heatmap illustrates the overview of each firm's performance. Each individual rectangle depicts the performance of each firm. The colour coding defines the performance of each firm with the standardised colour bar on the right.

Figure 4.12 depicts the first-year long-run performance of IPO non-acquirer firms. The figure illustrates that a large number of new public non-acquiring firms are negative. A large number of IPO non-acquiring firms underperformed when compared to a stock proxy.

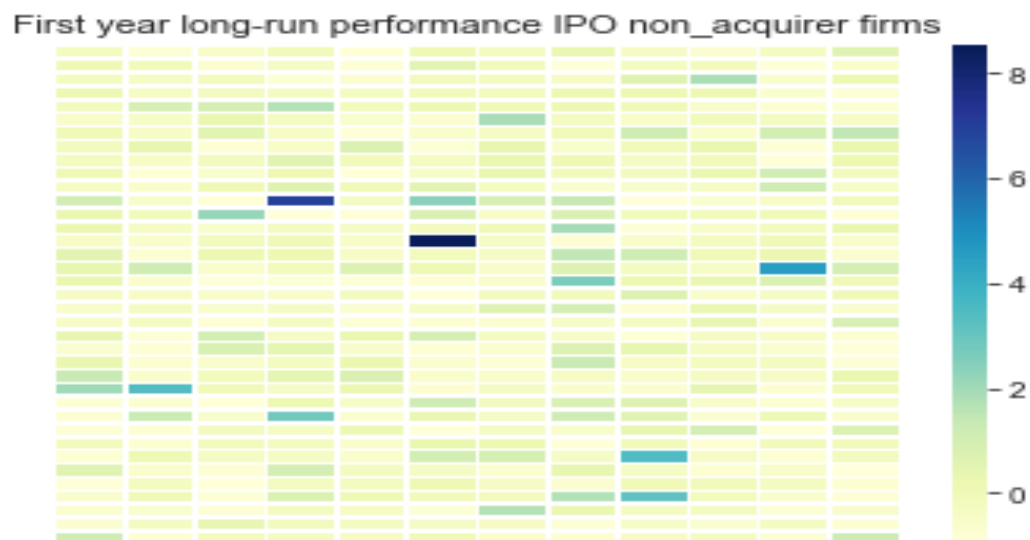


Figure 4.12 Long-Run Performance of each IPO Non-Acquiring Firm after the First Year of Listing

Figure 4.13 depicts the second-year long-run performance of IPO non-acquirer firms. The figure illustrates that the performance of a large number of new public non-acquiring firms is negative. A large number of IPO non-acquiring firms underperformed when compared to a stock proxy.

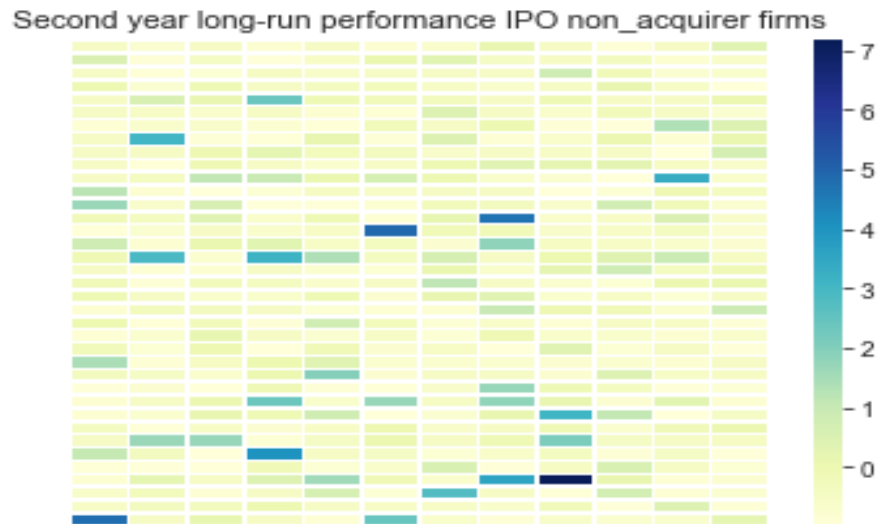


Figure 4.13 Long-Run Performance of Each IPO Non-Acquiring Firm after the Second Year of Listing.

Figure 4.14 depicts the long-run performance of IPO non-acquirer firms in the third year. The figure illustrates that the performance of a large number of new public non-acquiring firms are non-negative. The underperformance of the IPO non-acquiring firms seems to diminish after three years of listing.



Figure 4.14 Long-Run Performance of each IPO Non-Acquiring Firm after the Third Year of Listing.

4.1.2.5 IPO Acquirer Firm Performance

Figure 4.15 illustrates the first-year performance of the IPO acquirer firms. The graph depicts the first-year performance of normal and kernel distribution. The dotted line in the chart is slightly on the positive side of the graph. This means that the mean IPO acquirer performance is positive. Unlike the IPO non-acquirer firms, IPO acquirer firms are contributing positively to the performance of the overall sample after the first year of listing.

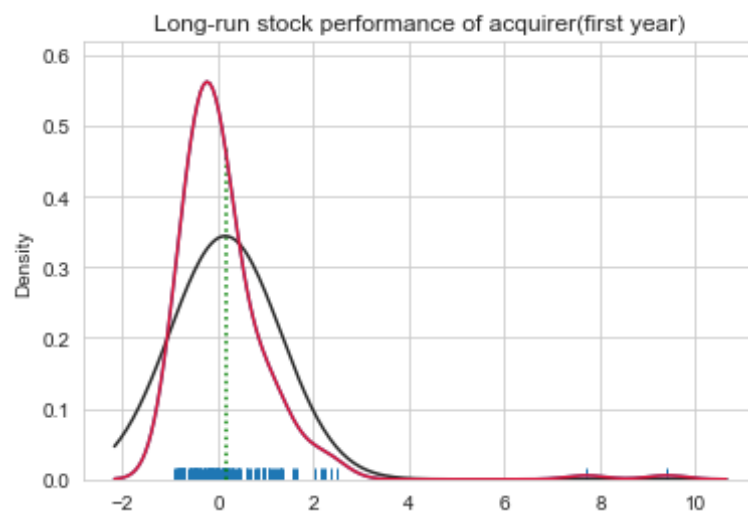


Figure 4.15 First-Year Performance of IPO Acquirer Firms

Figure 4.16 depicts the second-year stock performance of IPO acquirer firms. The graph illustrates the stock performance of kernel and normal distribution of IPO acquirer firms in the second year after listing. The dotted line depicts the mean performance of IPO acquirers in the graph. The mean performance of IPO acquirer firms is slightly positive. The performance is unlike the overall performance of IPOs and IPO non-acquirers in the second year is negative.

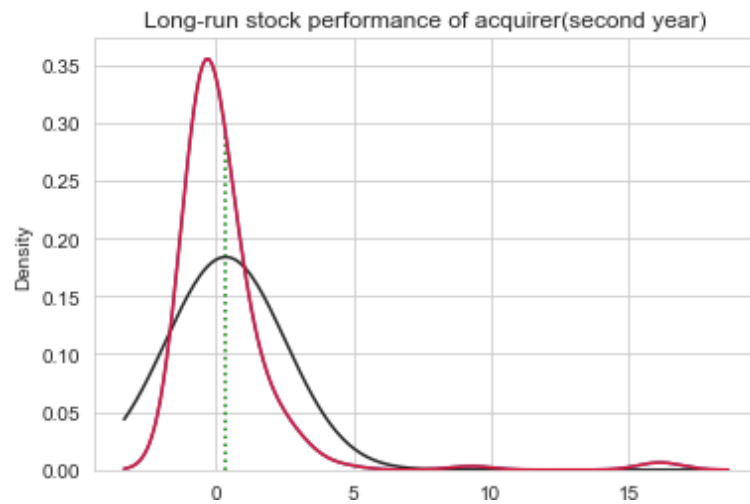


Figure 4.16 Depicts the Second-Year Performance Distribution of the IPO Acquirer Firms

Figure 4.17 illustrates the third-year performance distribution of IPO acquirer firms. The graph illustrates the stock performance of kernel and normal distribution of IPO acquirer firms in the second year. The dotted line depicts the mean performance of IPO acquirers in the graph. The mean performance of IPO acquirer firms is positive. The performance is unlike the overall performance of IPOs and IPO non-acquirers in the second year which are negative.

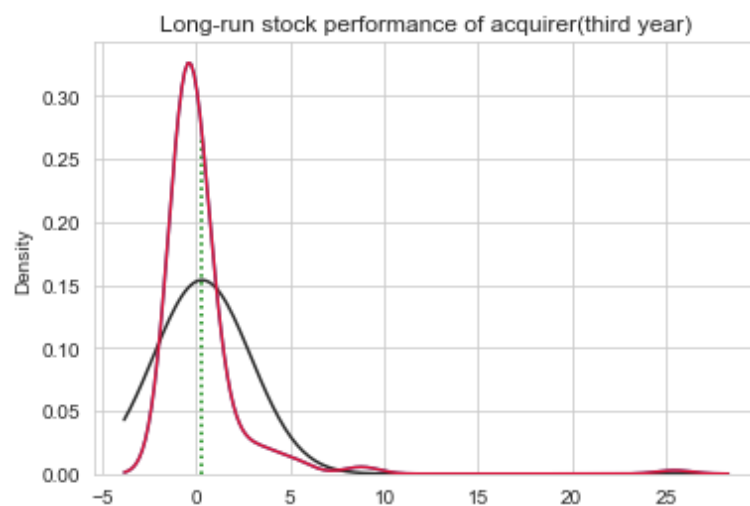


Figure 4.17 Performance Distribution of IPO Acquirer Firms in the Third Year.

4.1.2.6 Heat Map Of IPO Acquirer Firms

As discussed above, the distribution chart provides an overall view of the performance of the IPO acquirer firm, while the heat map illustrates the performance of each firm using colour coding.

Figure 4.18 illustrates the heat map performance of the IPO acquirer firms in the first year. The heat map shows that the performance of a large number of firms is above zero. This means that the IPO acquirer firms perform positively after the first year of listing. On the contrary, IPO non-acquiring firms perform negatively.

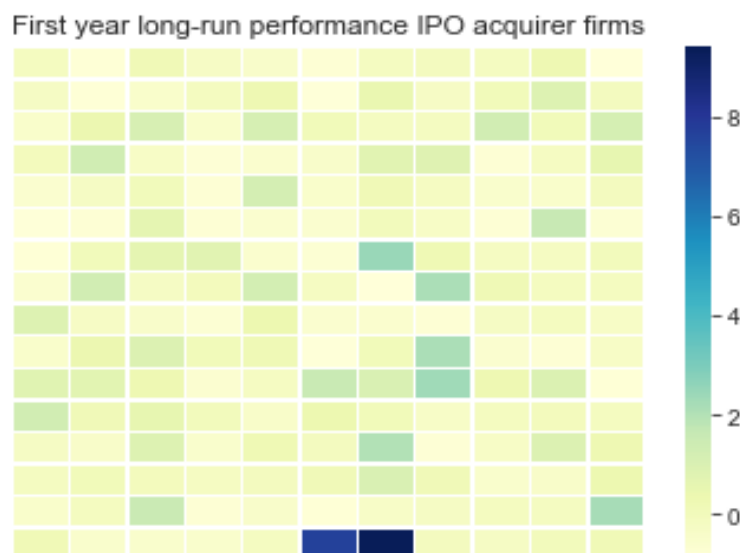


Figure 4.18 HeatMap of the IPO Acquirer Firms in the First Year.

Figure 4.19 shows the long-run performance of each IPO acquirer firm in the second year. The figure illustrates the performance of a large number of IPO acquirer firms after the second year of listing. As discussed, the performance of the IPO acquirer firms is not negative. IPO acquirers contribute positively to alleviate the underperformance of the overall IPOs.

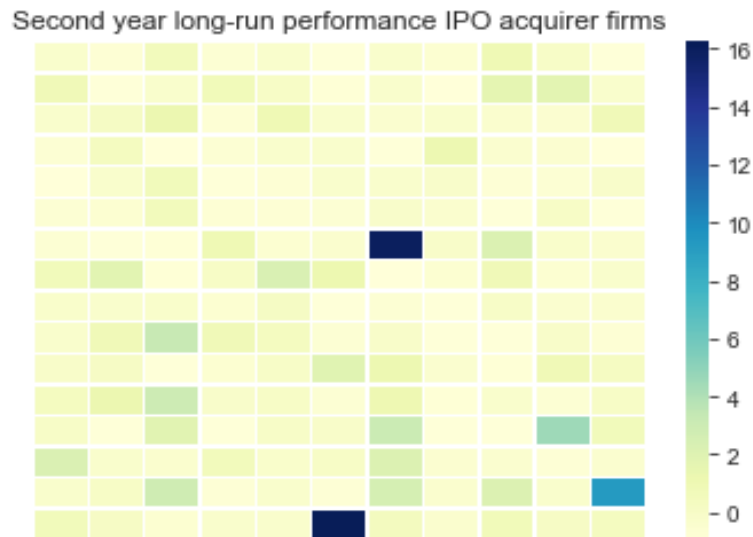


Figure 4.19 Long-Run Performance of each IPO Acquirer Firm in the Second Year.

Figure 4.20 shows the long-run performance of each IPO acquirer firm in the second year. The figure illustrates a large number of IPO acquirer firms' performance after the third year of listing. As discussed, the performance of the IPO acquirer firms is non-negative. And IPO acquirers contribute positively to alleviating the underperformance of the overall IPOs.

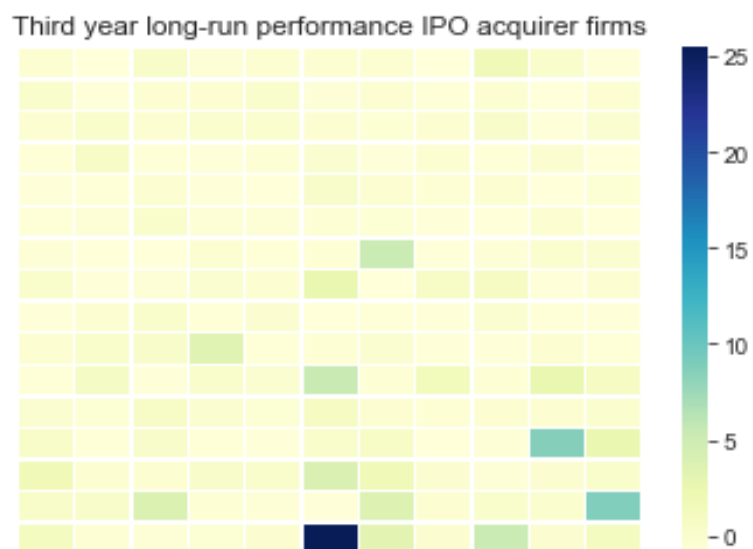


Figure 4.20 Third-Year Long-Run Performance of each IPO Acquirer Firm

4.1.3 Independent Sample T-Test Results

The study used an independent sample t-test to examine whether there is any significant difference between IPO acquirers and non-acquirers. Table 4.3 shows an independent sample t-test. The results indicate that the performance of IPO acquirers and IPO non-acquirers firms differs significantly at a 5% level of significance in the first year, but during the second and third years, they differ significantly at a 1% level of significance. From the independent sample t-test analysis, it can be inferred that the mean performance of IPO acquirers differs significantly from the IPO non-acquirers. The results indicate significant difference but no direction. In order to know the direction, a multiple regression model is used using control variables.

Table 4.3 Independent sample t-test

		t-test for Equality of Means						
		t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
BHR first year	Equal variances assumed	-2.062	592	.040	-.18705	.09072	-.36521	-.00888
BHR second year	Equal variances assumed	-3.781	549	.000	-.514	.136	-.780	-.247
BHR third year	Equal variances assumed	-2.795	525	.005	-.463	.165	-.788	-.137

4.1.4 Regression Analysis

The multiple regression analysis is used to study the impact of acquisition activity on an IPO firm's returns while controlling the effect of other variables. The acquisition activity is measured using a dummy variable where '1' represents IPO firms that went for acquisition within three years of listing; '0' represents IPO firms that did not go for acquisition. The control variables employed in multiple regression are, namely, the age of the firm, issue expense, the qualified institutional buyer (QIB_{times}), issue size, underpricing, post-IPO promoter holding, and earning per share (EPS_{pre-IPO}). After running multiple regression, the

study checked for heteroscedasticity using the white heteroscedasticity test, and the results showed that the chi-square values were well over the threshold value. The test showed that no heteroscedasticity was found in the data. The regression analysis employed a large number of control variables, and the multicollinearity among the variables could impact the results. The study checked for multicollinearity, and the results showed that there is no multicollinearity among independent variables.

Table 4.4 Multi-Regression Analysis of Acquisition Activity of IPO Performance.

Independent Variable	First year long-run stock performance		Second year long-run stock performance		Third year long-run stock performance	
	B	Sig.	B	Sig.	B	Sig.
Intercept	- 0.309	0.123	-0.422	0.134	- 0.718	0.01
Acquisition dummy	0.816	.000***	0.38	.004***	0.32	.014**
BSE 100 returns	1.51	.000***	0.94	.000***	0.807	.000***
Age	0.002	0.52	0.015	.000***	0.026	.000***
QIB	0.001	0.674	-0.001	0.558	- 0.002	0.383
Underpricing	- 0.009	0.887	-0.029	0.75	-0.1	0.262
RONW	0	0.742	-0.001	0.556	0	0.798
EPS	0	0.887	0	0.832	0.001	0.744
Promoter holding post-IPO	0.004	0.165	0.002	0.617	0.003	0.415

Ln issue size	- 0.019	0.588	-0.025	0.611	- 0.016	0.738
R square	0.146		0.128		0.117	
Adj. R square	0.101		0.083		0.071	

***- 1% significance level, **- 5% significance level, *- 10% significance level

Equation 4-1 The Equation Used for Analysing the Data.

$$BHR_{t=1-3} = \beta_0 + \beta_1 acqu_{dum} + \beta_2 age + \beta_3 market\ returns + \beta_4 QIB + \beta_5 Underpricing \\ + \beta_6 promoter\ holding_{post-IPO} + \beta_7 EPS + \beta_8 issue\ size + \beta_9 RONW$$

In equation 4.1, BHR representing “buy-hold returns”, is an indicator of IPO firms’ performance concerning the index returns as mentioned in Chapter III research methodology. The $acqu_{dum}$ is the dummy variable for the acquisition activity, age represents the age of the firm from the time of inception, QIB represents the number of times the IPO got subscribed by qualified institution buyer (QIB), underpricing is the listing day return, promoter holding post-IPO represents the percentage of promoter shareholdings after listing, issue size represents the amount of capital raised through the public issue, and EPS is earning per share.

4.1.4.1 Results and findings

Multiple regression analysis is employed to test the equation 4.1. Table 4.4 depicts the results of the analysis. During the first and second years, the acquisition activity is highly significant and positively influences the IPO firms’ returns during the first and second years after listing. The firms that have taken acquisitions subsequent to IPO are performing better than the ones that have not. In the third year, the acquisition activity is significant and

positively influences the IPO firms' returns. Arian and Stulz (2016) suggested that the acquiring firm's performance is significantly positive while making value-enhancing acquisitions. The IPOs firms that have gone for acquisition activity subsequently after listing are involved in value-enhancing acquisitions. Other control variables such as the age of the firm, issue expense, total subscription (times), underpricing, post-IPO promoter holding, and earning per share ($EPS_{pre-IPO}$) are not significant during the first year. The QIB, EPS, issue size, and issue expense are significant during the second and third years. The issue size positively influences the returns of IPO firms. But QIB, EPS, and issue expense are negatively influencing the returns of the IPO firms during the same period.

Section II

This section studies the second objective which is stated as follows “ To study the influence of IPO grading on the IPO acquirer’s long-run performance”.

4.2 IPO Grading

IPO grading was a certification mechanism mandated by the Indian regulator SEBI in May 2007. Grading of IPOs was based on the fundamentals of the firms like business and financial prospects, management quality and corporate governance practices, etc. The highest IPO grade, i.e. “5”, was given to the fundamentally stronger firm, and the least IPO grade, i.e. “1”, was given to the fundamentally weak firm. SEBI revoked the mandated IPO grading in the year 2014.

Since the time period of the study falls during the period of mandatory IPO grading, the study explores the influence of mandatory IPO grading on the IPO acquirer’s performance. In 2007 SEBI made IPO grading mandatory. The grading of IPOs was a certification mechanism intended to benefit retail investors in investment decision-making. The rating agencies graded the IPOs on the basis of the firm’s fundamentals, namely business prospects and competitive position, financial position, management quality, corporate governance practices, compliance and litigation history, and new projects.

4.2.1 Descriptive of Graded IPO Acquirer Sample

Figure 4.21 provides the frequency of distribution of IPO acquirer firms from 1999-2018. The figure shows the number of graded and non-graded IPO acquirer firms. The figure shows a large number of graded IPO acquirers from early 2007, as IPO grading was made compulsory in mid-2007. In the subsequent years, all IPOs were graded. In 2012, one IPO was not graded because it was a rating agency by itself (CARE). In 2014, IPO grading was

made optional, and as a result, no graded IPO acquirer firms were found in the subsequent years.

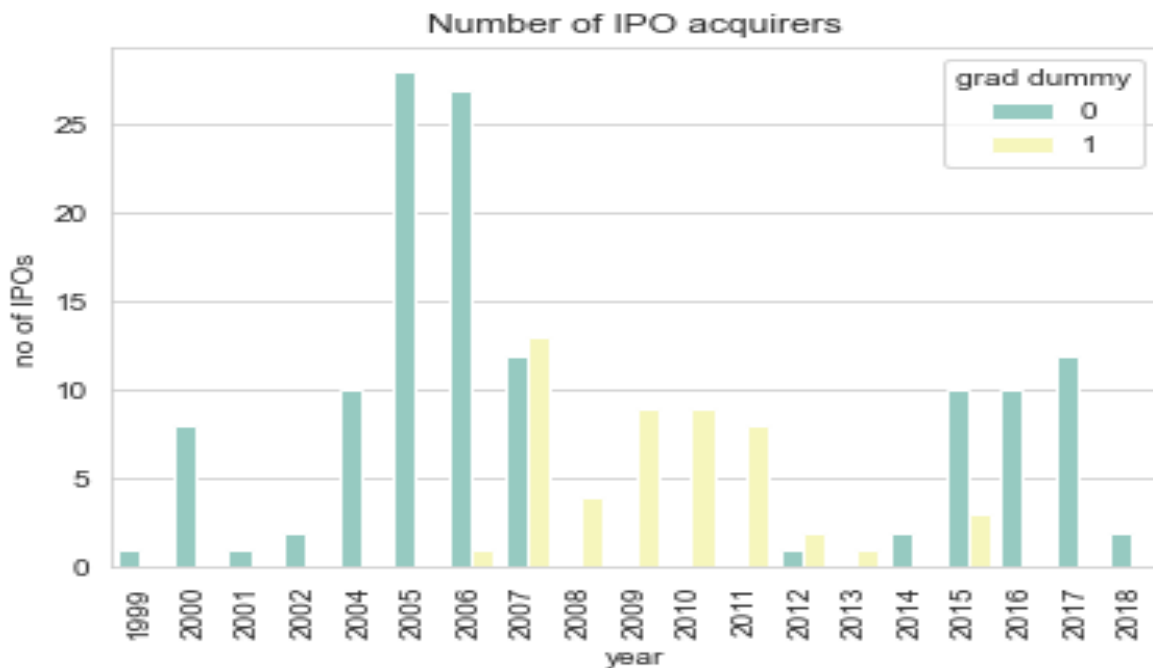


Figure 4.21 Number of IPO Acquirer Firms Listed from 1999-2018.

This Chart Shows Graded IPO Acquirer Firms in Yellow Bars. In the Middle of 2007, IPO Grading was Made Mandatory. But in 2014 IPO Grading Was Made Optional by SEBI.

4.2.2 Regression Analysis

The multiple regression analysis is used to study the impact of grading on IPO acquirer firms' returns while controlling the effect of other variables. IPO grading is measured using a dummy variable where '1' represents IPO firms that went for acquisition within three years of listing, whereas '0' represents IPO firms that did not go for acquisition. The control variables used in multiple regression are the age of the firm, issue expense, the qualified institutional buyer (QIB_{times}), issue size, underpricing, post-IPO promoter holding, and earning per share (EPS_{pre-IPO}). After running the multiple regression, the study checked for the heteroscedasticity using White heteroscedasticity test, and the test showed that the chi-square values are well over the threshold value. It was found that there is no

heteroscedasticity in the data. As the regression analysis deploys many control variables, the multicollinearity among the variables could impact the results. The study checked for multicollinearity and found that there was no multicollinearity among the independent variables.

Equation 4-2 Regression Equation Deployed for Analysing the Data.

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$$BHR_{acquir(t=1-3)} = \beta_0 + \beta_1 grad + \beta_2 age + \beta_3 issue\ expense + \beta_4 QIB + \beta_5 Underpricing + \beta_6 promoter\ holding_{post-IPO} + \beta_7 EPS$$

BHR is a Dependent Variable, and It Represents the Buy-Hold Returns of IPOs for the First Three Years. The IPO Grading Variable is an Independent Variable, and It is Used as a Dummy Variable. Other Variables are Age, Issue Expense, Times Subscription of Qualified Institutional Buyer(QIB), Underpricing, Pre-IPO Earning Per Share(EPS) and Post-IPO Promoter Holding as Employed In Equation 4.2

In equation 4.2, BHR represents the “buy-hold returns”, which measure IPO firms’ performance concerning the index returns as mentioned in the methodology chapter. The $grad_{dum}$ is the dummy variable for graded IPO, Age represents the age of the firm from the time of inception, QIB represents the number of times the IPO got subscribed by qualified institution buyer (QIB), Underpricing is the listing day return, Promoter holding $post-IPO$ represents the percentage of promoter shareholding after listing, issue expense represents the amount of money spend to float the issue, and EPS stands for earning per share

Table 4.5 The Multiple Regression Analysis of Grading Dummy's Influence on the Long-Run Performance of IPO Acquirers.

	First year long-run stock performance		Second year long-run stock performance		Third year long-run stock performance	
Independent variable	B	Sig.	B	Sig.	B	Sig.
Intercept	0.71	0.062	1.183	0.082	1.507	0.063
Age	0.004	0.6	0.028	.028**	0.029	.053*
Issue expense crores	-0.004	0.335	-0.006	0.447	-0.006	0.503
QIB	-0.002	0.598	-0.005	0.375	-0.006	0.376
Underpricing	-0.123	0.55	0.035	0.925	-0.283	0.519
Grading_dummy	-0.641	.004***	-0.925	.018**	-0.832	.073*
EPS	-0.004	.098*	-0.003	0.383	-0.004	0.393
Promoter holding post IPO	-0.003	0.593	-0.012	0.261	-0.016	0.185

4.2.2.1 Results and Findings

Multiple regression analysis results are reported in Table 4.5. The results show that grading significantly influences the IPO acquirer's performance in the first, second, and third years. The influence of grading activity on the performance of IPO acquirers is negative. Other variables like the age of the firm influence the performance of IPO acquirers in the

second and third years. EPS is significant only in the first year, but in the later years, its influence disappears.

Grading of an IPO negatively influences the IPO acquirer's performance, and it can be construed that the graded IPO acquirer firms are performing worse than the non-graded IPO firms. The age of the IPO acquirer's firm positively influences the IPO acquirer's performance, and the age of the IPO acquirers is also instrumental in choosing the right target for the acquisition.

Section-III

This section studies the third objective of the study which is “to examine the influence of acquisition activity of IPO firms on their long-term operating performance”.

4.3 Operating Performance of IPOs

This section deals with the operating performance of IPOs. As discussed in Chapter III Research methodology presents the operating performance as measured by profit before income, tax, depreciation, and amortisation ($PBITDA_{\text{sample}}$) divided by the total assets of sample IPO firms, and further the derived value is deducted by a median of PDITDA divided by total assets of the industry

$$\text{Operating Performance} = \frac{PBITDA (\text{sample firm})}{\text{Total Assets}} - \frac{PBITDA (\text{Industry Median})}{\text{Total Assets}}$$

The descriptive statistics of IPO acquirers and non-acquirer and the overall IPO firms are given in the sample descriptives. In the later section, regression analysis is used to know the direction.

4.4 Descriptives of IPO Sample Operating Performance

Figure 4.22 depicts the distribution of long-run operating performance of overall IPO firms in the first year. IPO firms’ operating performance in the first year after listing on the exchange is positive. Indian IPO firms’ operating performance contrasts with the study of Bharat A. Jain and Omesh Kini (1994).

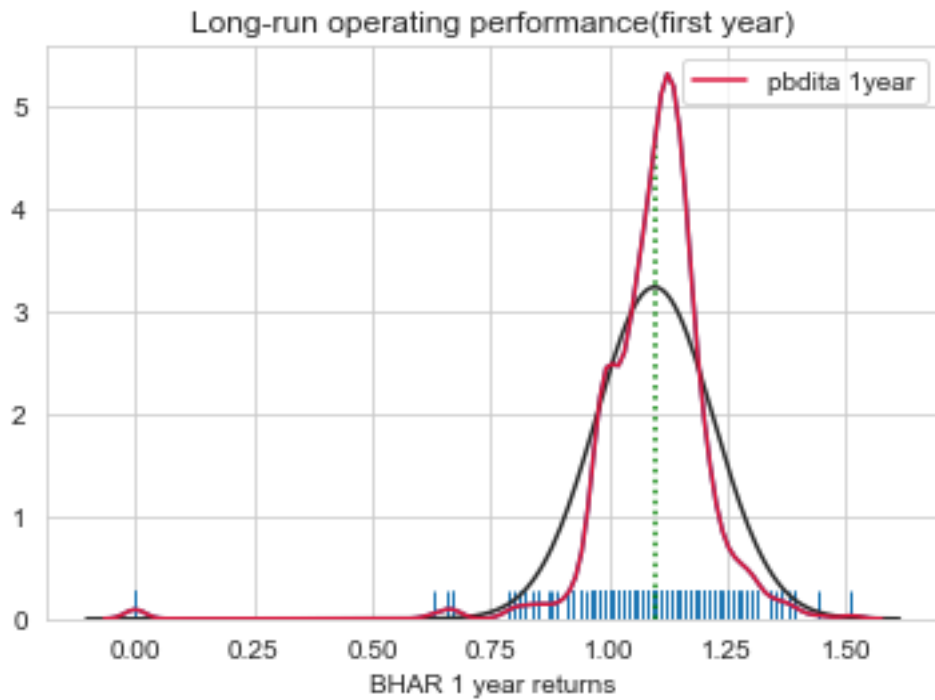


Figure 4.22 Distribution of Operating Performance of IPOs After the First Year of Listing.

Figure 4.23 presents the distribution of long-run operating performance of overall IPO firms in the second year. The operating profit of IPO firms in the second year is also positive. From the study, one can understand that the operating performance is slightly decreasing after the first year.

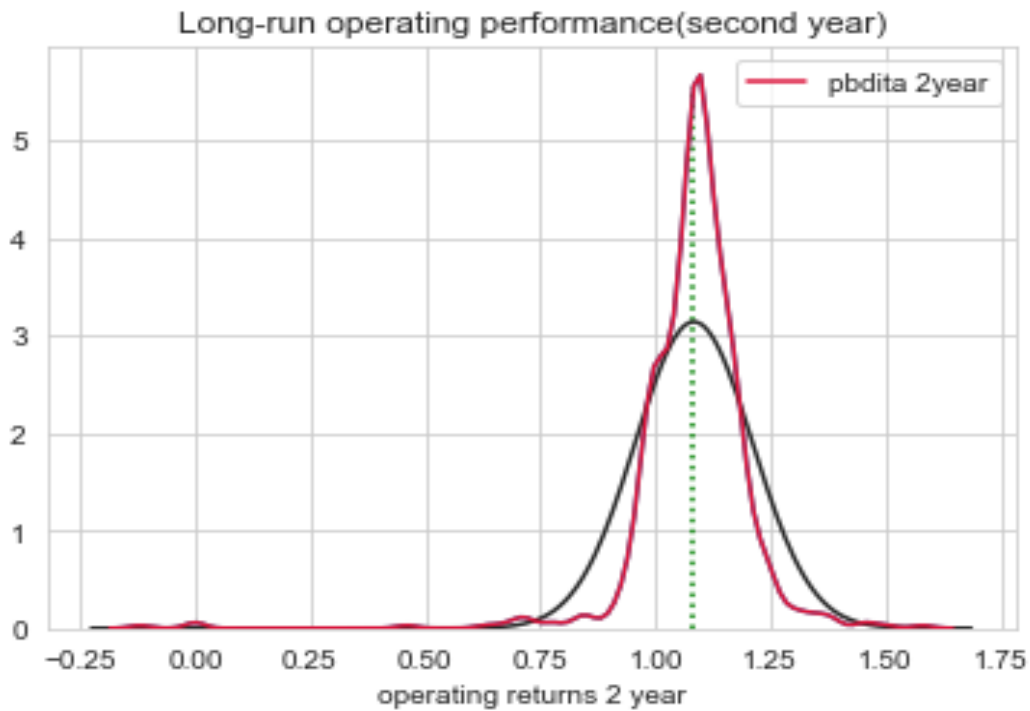


Figure 4.23 Distribution of the Operating Performance of IPOs After the Second Year of Listing.

Figure 4.24 presents the distribution of long-run operating performance of overall IPO firms in the third year. The operating profit of IPO firms in the third year is also positive. From the study, one can see that the operating performance remained almost the same as that of the second year.

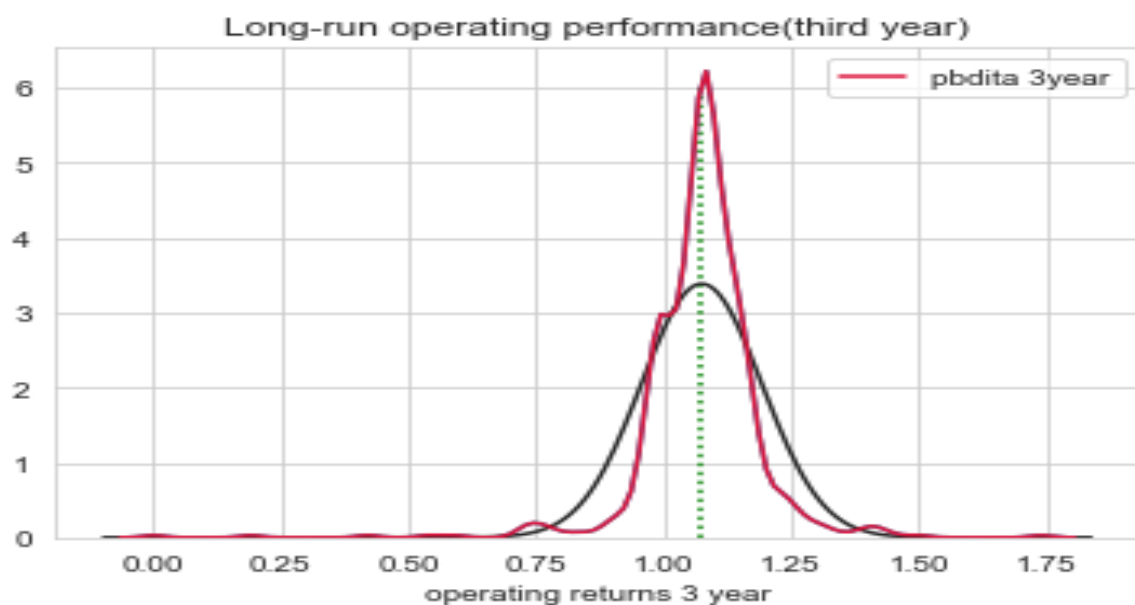


Figure 4.24 Distribution of the Operating Performance of IPOs after the Third Year of Listing.

Figure 4.25 presents the distribution of the long-run operating performance of IPO acquirer firms in the first year. The operating profit of IPO acquirer firms in the first year is positive. From the chart, one can understand that the operating performance of IPO acquirer firms is slightly more than that of the IPO firms in the first year.

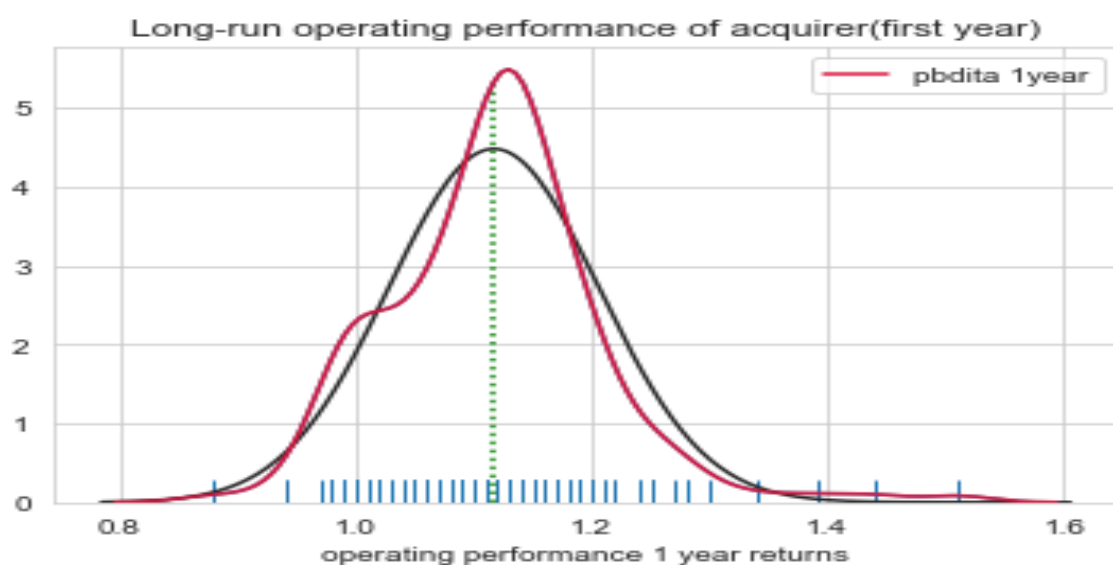


Figure 4.25 Operating Performance of IPO Acquirer Firms after the First Year of Listing.

Figure 4.26 presents the distribution of the long-run operating performance of IPO acquirer firms in the second year. The operating profit of the IPO acquirer firms in the second year is positive. From the chart, one can understand that the operating performance is slightly more than that of IPO firms in the second year.

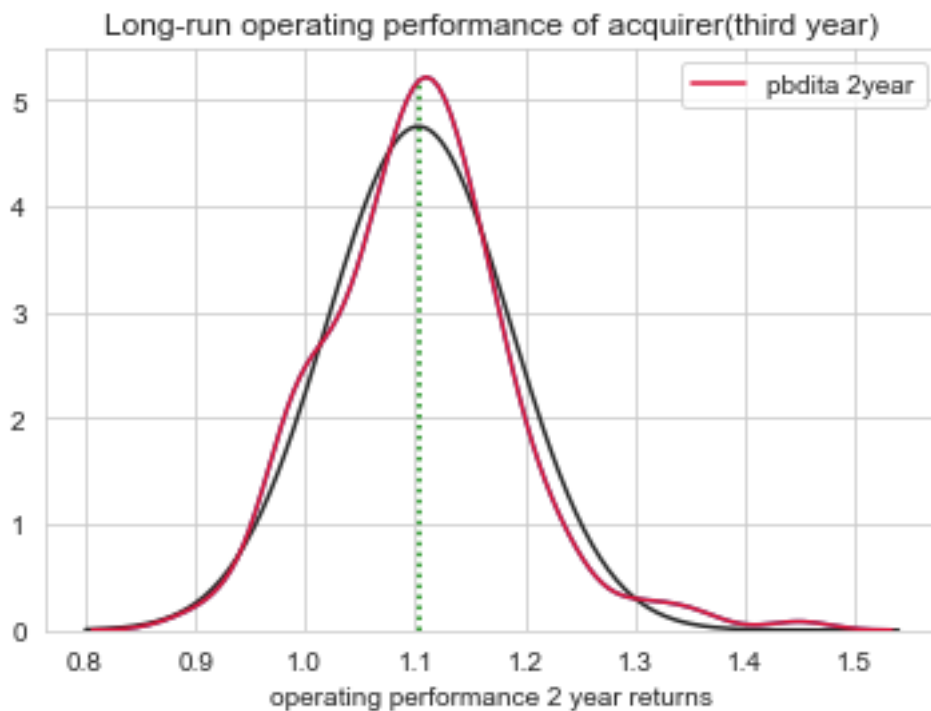


Figure 4.26 Operating Performance of IPO Acquirer Firms after the Second Year of Listing.

Figure 4.27 presents the distribution of the long-run operating performance of IPO acquirer firms in the third year. The operating profit of IPO acquirer firms in the third year is positive. From the chart, one can understand that the operating performance is slightly more than that of IPO firms in the third year.

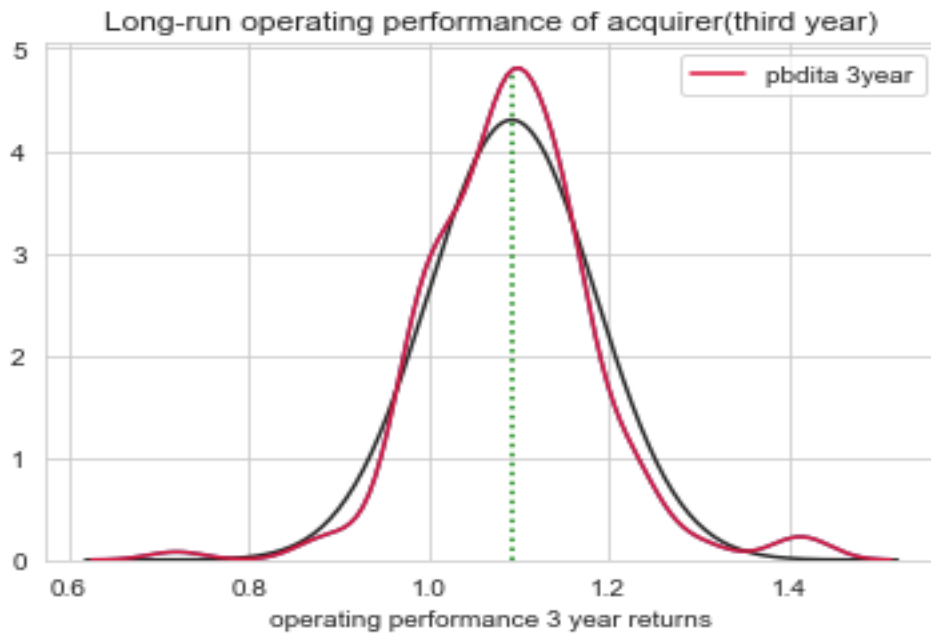


Figure 4.27 Operating Performance of IPO Acquirer Firms after the Third Year of Listing.

Figure 4.28 presents the distribution of long-run operating performance of IPO non-acquirer firms in the first year. The operating profit of the IPO non-acquirer firms in the first year is positive. From the chart, one can understand that the operating performance is less than that of the IPO acquirer firms in the first year.

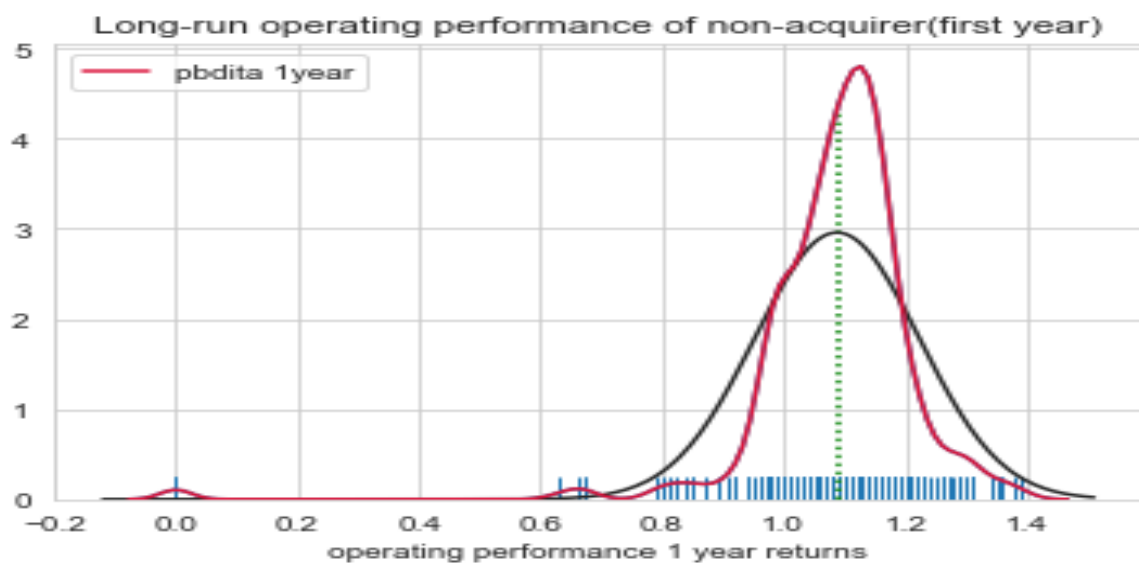


Figure 4.28 Operating Performance of IPO Non-Acquirer Firms after the First Year of Listing.

Figure 4.29 presents the distribution of long-run operating performance of IPO non-acquirer firms in the second year. The operating profit of the IPO non-acquirer firms in the second year is positive. By comparing the chart, one can understand that the operating performance is less than that of IPO acquirer firms in the second year.

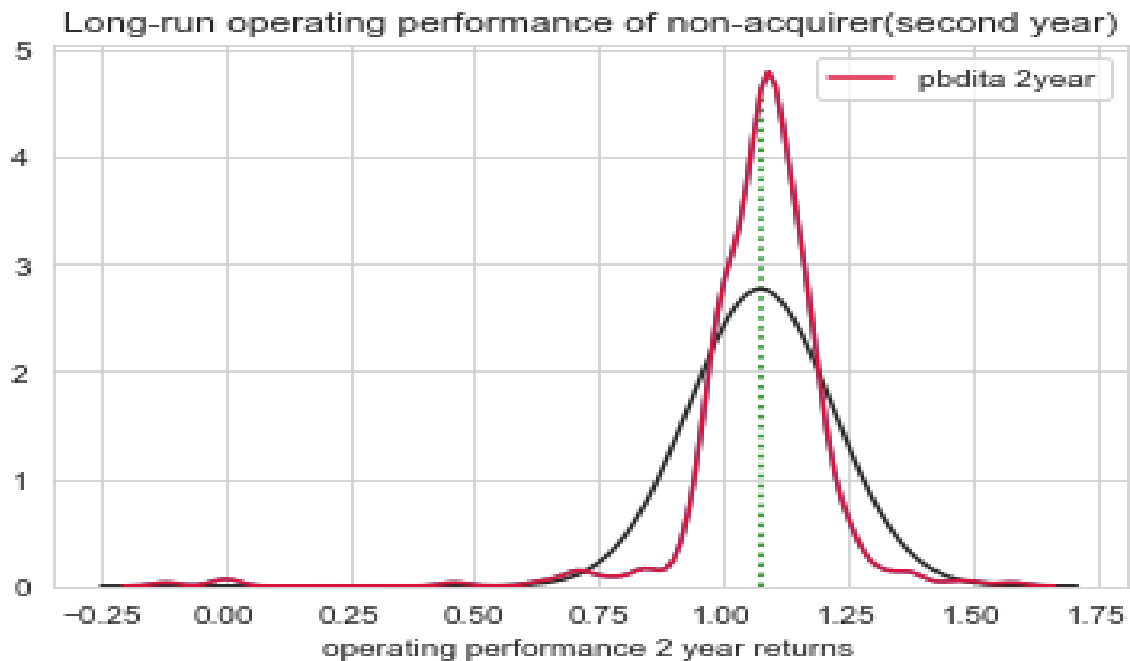


Figure 4.29 Operating Performance of IPO Non-Acquirer Firms After the Second Year of Listing.

Figure 4.30 presents the distribution of long-run operating performance of IPO non-acquirer firms in the third year. The operating profit of IPO non-acquirer firms in the third year is positive. From the chart, one can understand that the operating performance is less than that of IPO acquirer firms in the third year.

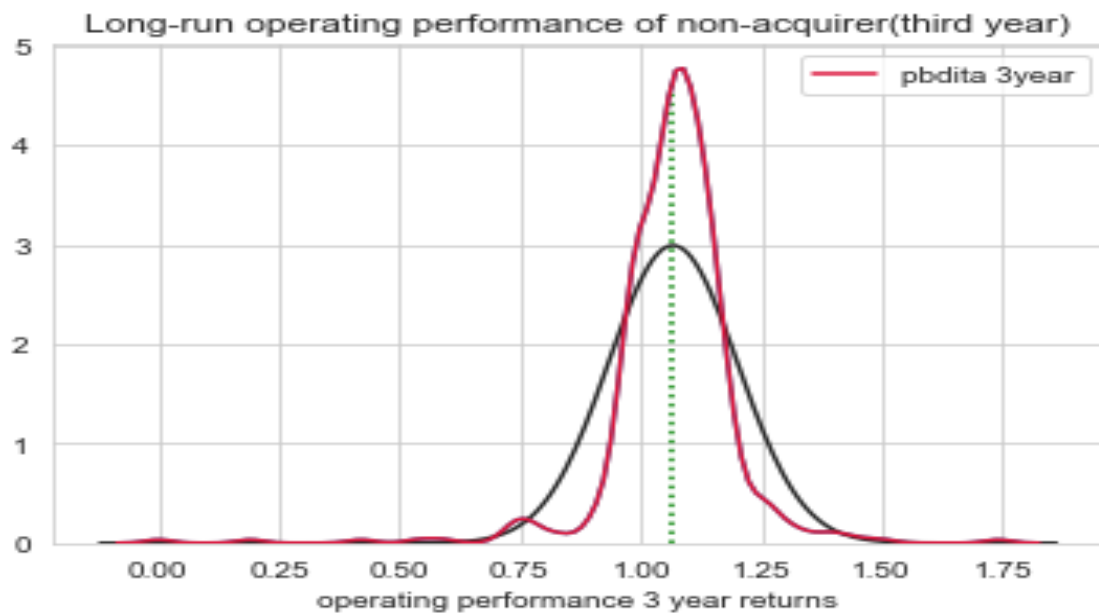


Figure 4.30 Operating Performance of IPO Non-Acquirer Firms After the Third Year of Listing.

Figure 4.31 presents the individual operating performance heat map of IPOs in the first year. Each box in the heat map represents the operating performance of each IPO firm. From the chart, one can understand that the operating performance of none of the firms in the IPO sample is negative.

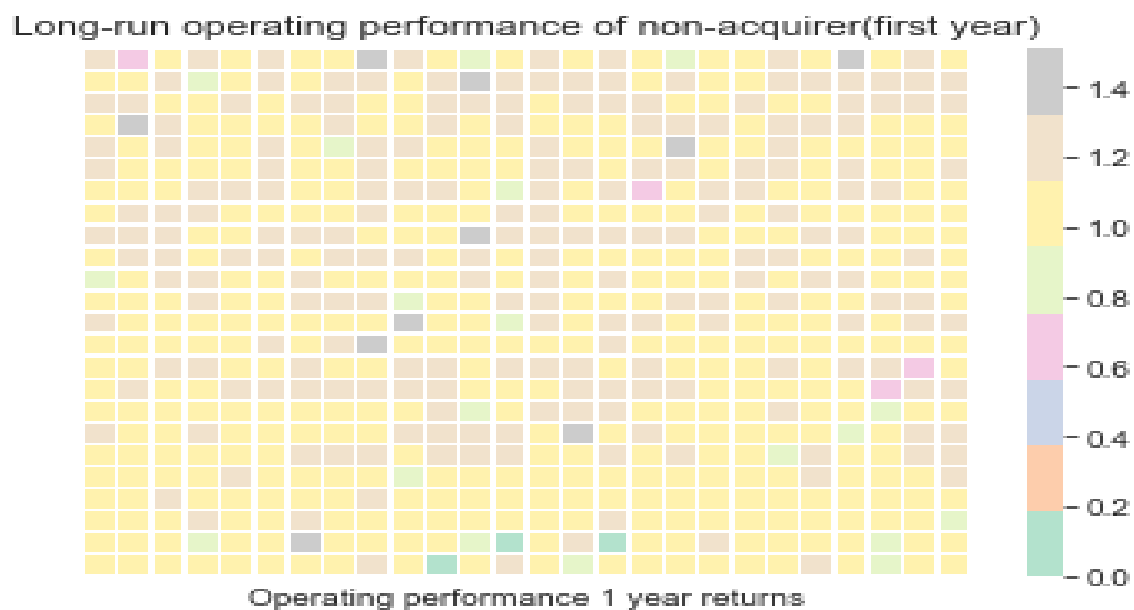


Figure 4.31 Operating Performance Heat Map of Individual IPO Firm After the First Year of Listing.

Figure 4.32 presents the individual operating performance heat map of IPOs in the second year. Each box in the heat map represents the operating performance of each IPO firm. From the chart, one can understand that the operating performance of none of the firms in the IPO sample is negative.

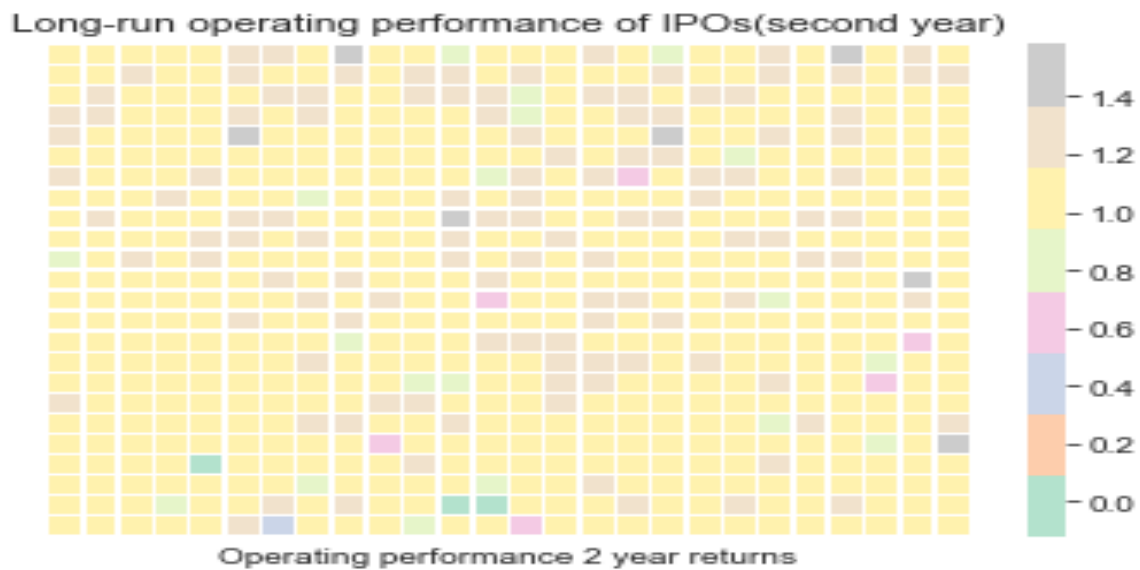


Figure 4.32 Operating Performance Heat Map of Individual IPO Firm After the Second Year of Listing.

Figure 4.33 presents the individual operating performance heat map of IPOs in the third year. Each box in the heat map represents the operating performance of each IPO firm. From the chart, one can understand that the operating performance of none of the firms in the IPO sample is negative.

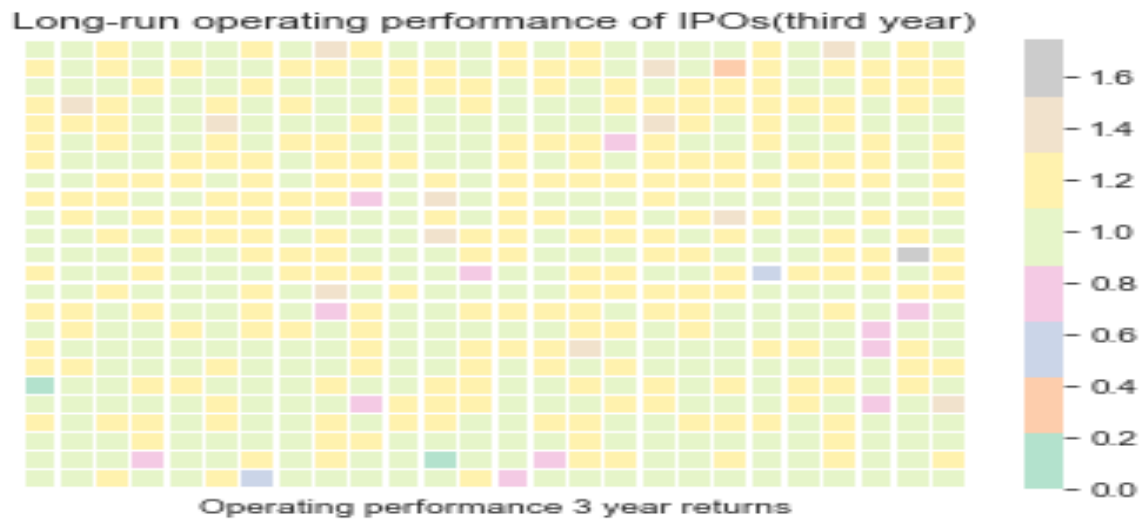


Figure 4.33 Operating Performance Heat Map of Individual IPO Firm After the Third Year of Listing.

Figure 4.34 presents the individual operating performance heat map of IPO acquirer firms in the first year. Each box in the heat map represents the operating performance of each IPO acquirer firm. From the chart, one can understand that none of the firms' operating performance in the IPO acquirer sample is negative, and their performance is better than that of IPO firms.

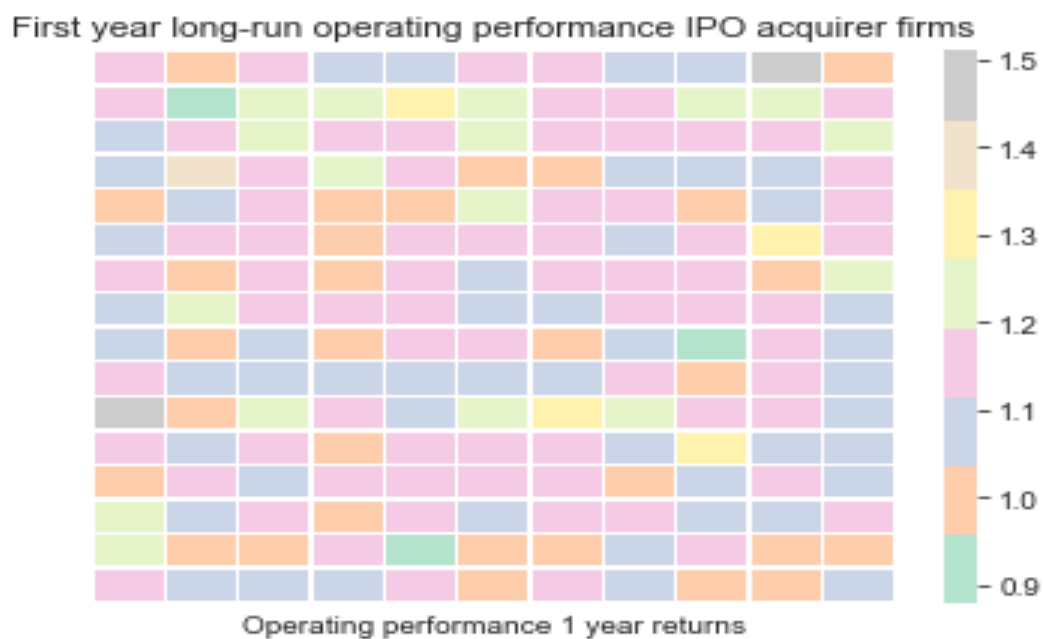


Figure 4.34 Operating Performance Heat Map of Individual IPO Acquirer Firms after the First Year of Listing.

Figure 4.35 presents the individual operating performance heat map of IPO acquirer firms in the second year. Each box in the heat map represents the operating performance of each IPO acquirer firm. From the chart, one can understand that none of the firms' operating performance in the IPO acquirer sample is negative, and their performance in the second year is better than that of the first year.

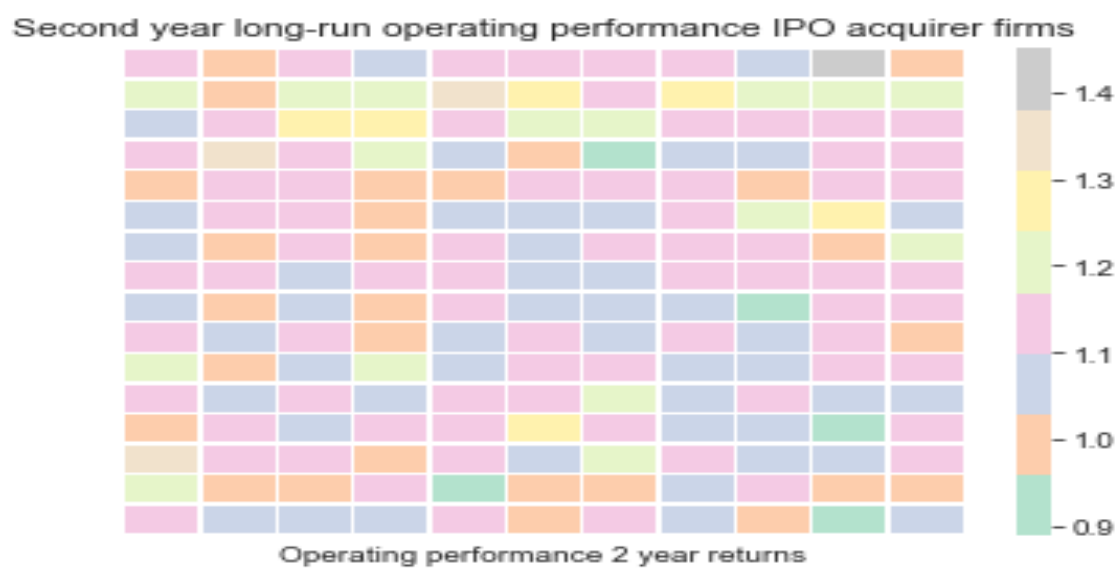


Figure 4.35 Operating Performance Heat Map of Individual IPO Acquirer Firms after the Second Year of Listing.

Figure 4.36 presents the individual operating performance heat map of IPO acquirer firms in the third year. Each box in the heat map represents the operating performance of each IPO acquirer firm. The chart shows that none of the firms' operating performance in the IPO acquirer sample is negative and their performance in the third year is better than that of IPO firms in the second year.

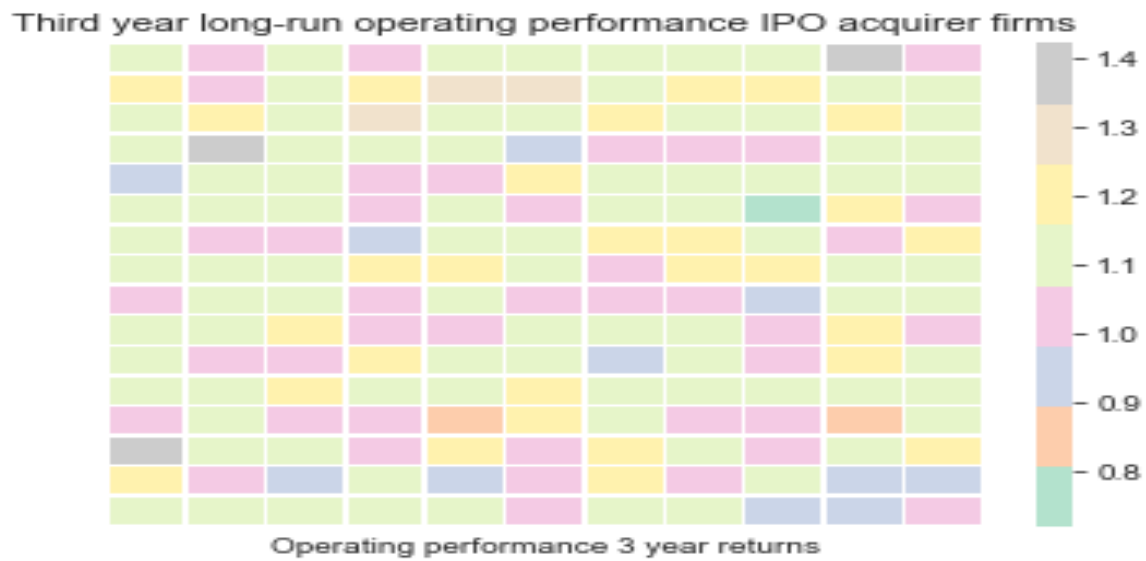


Figure 4.36 Operating Performance Heat Map of Individual IPO Acquirer Firms after the Third Year of Listing.

Figure 4.37 presents the individual operating performance heat map of IPO non-acquirer firms in the first year. Each box in the heat map represents the operating performance of each IPO acquirer firm. From the chart, one can understand that none of the firms' operating performance in the IPO acquirer sample is negative. But the operating performance of non-acquiring firms is lower than that of IPO acquirer firms and overall IPO firms.

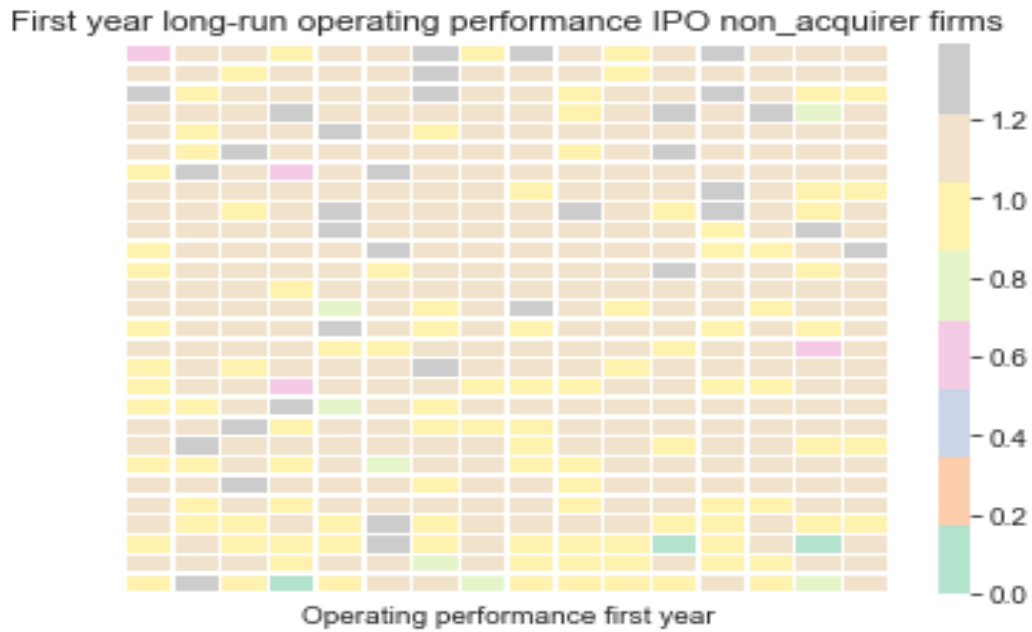


Figure 4.37 Operating Performance Heat Map of Individual IPO Non-Acquirer Firms after the First Year of Listing.

Figure 4.38 presents the individual operating performance heat map of IPO non-acquirer firms in the second year. Each box in the heat map represents the operating performance of each IPO acquirer firm. From the chart, one can construe that the few firms' operating performance in the IPO acquirer sample are negative, and the operating performance of non-acquiring firms is lower than that of IPO acquirer firms and overall IPO firms in the second year

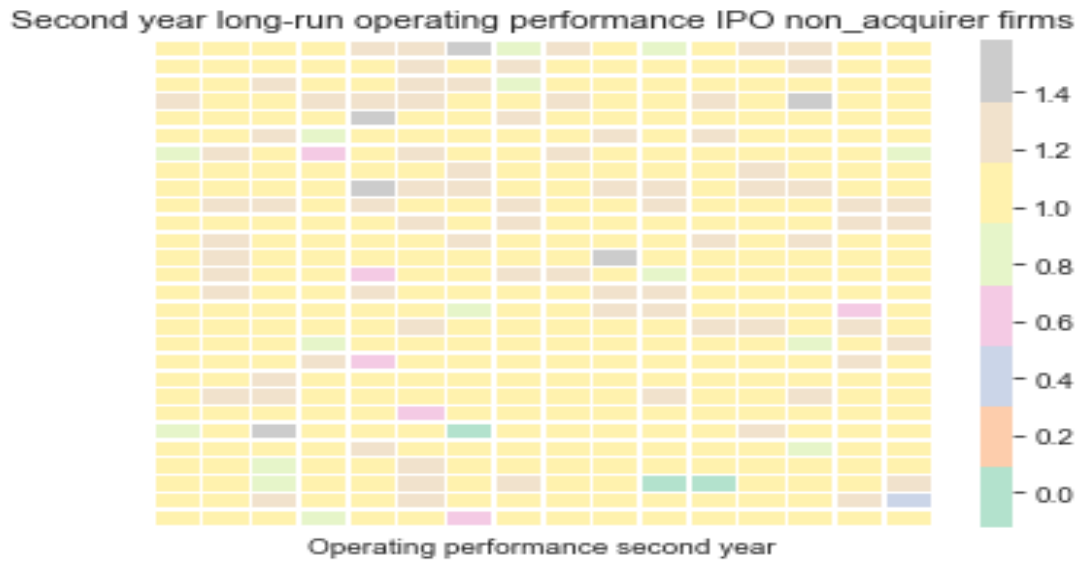


Figure 4.38 Operating Performance Heat Map of Individual IPO Non-Acquirer Firms after the Second Year of Listing.

Figure 4.39 presents the individual operating performance heat map of IPO non-acquirer firms in the third year. Each box in the heat map represents the operating performance of each IPO acquirer firm. From the chart, one can construe that none of the firms' operating performance in the IPO acquirer sample is negative. However, the operating performance of non-acquiring firms is lesser than that of IPO acquirer firms and overall IPO firms in the third year

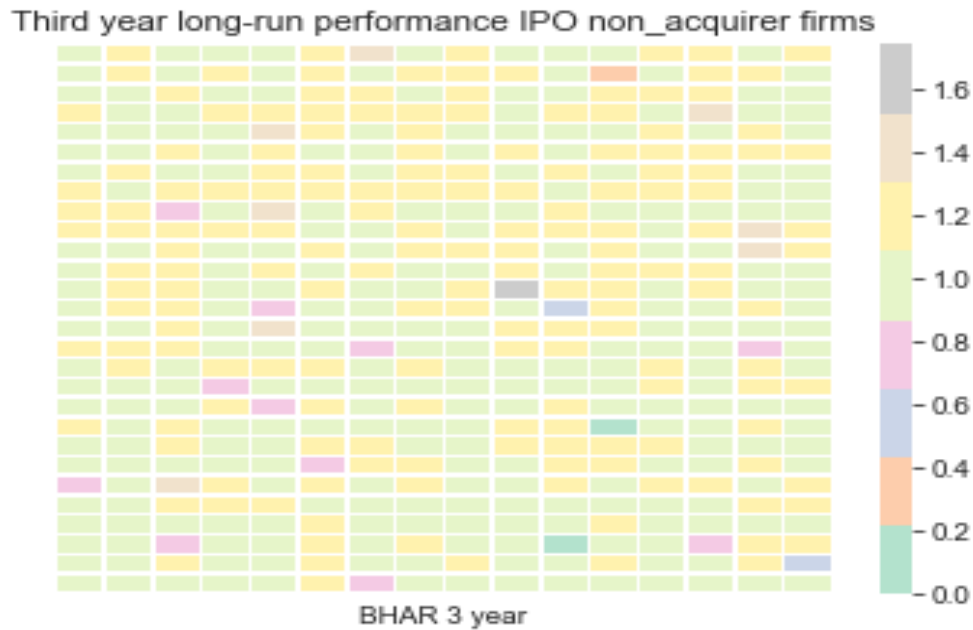


Figure 4.39 Operating Performance Heat Map of Individual IPO Non-Acquirer Firms after the Third Year of Listing.

4.5 Regression Analysis

The study used regression analysis to understand the impact of acquisition activity on the IPO firm's operating returns while controlling the effect of other variables. The acquisition activity is measured using a dummy variable where '1' represents IPO firms that went for acquisition within three years of listing, whereas '0' represents IPO firms that did not go for acquisition. The control variables employed in the multivariate regression are the age of the firm, issue expense, the qualified institutional buyer (QIB_{times}), issue size, underpricing, post-IPO promoter holding, and earning per share (EPS_{pre-IPO}). After running the regression, the study checked for heteroscedasticity using the white heteroscedasticity test, and the results showed that the chi-square values were well over the threshold value. It showed that no heteroscedasticity was found in the data.

As the regression analysis has used a large number of control variables, the multicollinearity among the variables could impact the results. Therefore, the study checked

for multicollinearity, and the results showed that there was no multicollinearity among the independent variables

Equation 4-3 Equation Used for Analysing the Data.

$$OP_{t=1-3} = \beta_0 + \beta_1 acqu_{dum} + \beta_2 age + \beta_3 ln issue\ size + \beta_4 QIB + \beta_5 Underpricing \\ + \beta_6 promoter\ holding_{post-IPO} + \beta_7 EPS + \beta_8 RONW + \beta_9 Group\ dummy$$

In equation 4.2, OP represents the operating performance, which measures IPO firms' operating performance while adjusting the industry median operating performance, as mentioned in the Research methodology chapter III. The $acqu_{dum}$ is the dummy variable for the acquisition activity, and Age represents the age of the firm, total sub represents the number of times the IPO got subscribed, Underpricing is the listing day return, promoter holding post-IPO represents the percentage of shareholding by the promoter after listing, group dummy represents dummy variable for group firms, and EPS stands for earning per share.

Table 4.6 Regression Analysis Results of the Influence of Acquisition Activity on the Operating Income in the First Year.

	Operating performance 1 st year		Operating performance 2 nd year		Operating performance in 3 rd year	
Model	t	Sig.	t	Sig.	t	Sig.
(Constant)	35.602	.000	22.570	.000	19.245	.000
Ln issue size	.189	22.570	-4.374	.000***	-7.279	.000***
RONW	1.870	-4.374	2.116	.035**	-.346	.035**
EPS	2.781	2.116	1.417	.157	1.885	.157
Underpricing	1.547	1.417	-.720	.472	-.745	.472

QIB(times)	2.085	-.720	2.870	.004***	2.512	.004***
Group dummy	-1.899	2.870	1.174	.241	2.255	.241
Age(years)	-2.438	1.174	-2.816	.005***	-1.723	.005***
Acquisition dummy	2.496	-2.816	3.682	.000***	1.648	.000***
Promoter holding post-IPO(%)	-.511	3.682	-1.569	.117	-.102	.117
R square	0.04		0.07		0.027	
Adj. R square	0.03		0.059		0.027	

***- 1% level of significance, **- 5% level of significance and *-10% level of significance

Acquisition activity is represented by the dummy variable, the Issue size is used as a natural log, RNOW is the return on net worth, and EPS stands for earnings per share. QIB is the qualified institutional buyer or institutional investor, and it is measured by the number of times the QIB subscribed for the issue. Group dummy is represented by dummy variable '1' for group companies and '0' for non-group companies. Age is measured by the number of years since the inception of the firm. Promoter holding is the percentage of shares held by the promoter after listing. Operating performance is industry-adjusted profit before interest, tax, depreciation, and amortisation (PBITDA) scaled by total assets(TA)

4.5.1.1 Results

Acquisition activity significantly and positively influences the long-run operating performance of the IPOs in the first two years. The influence of the acquisition activity on the performance of IPOs disappears in the third year. RONW, EPS, QIB, and group company are significant at 10 percentage level of significance during the first year. RONW and QIB are positively influencing the operating performance in all three years. EPS also positively

influences but its influence disappears after the first year. The age of the firm is significant, but it negatively influences the long-run operating performance.

4.5.1.2 Findings

The acquisition activity taken up by IPO firms is generating industry-adjusted positive operating returns. The operating performance of IPO acquirer firms showed that the firms are making value-enhancing acquisitions. Institutional investor presence brings discipline to the firm to operate efficiently, whereas the age of the firm decreases the operating efficiency. Group firms also influence the operating efficiency of IPO firms.

Section-IV

This Section seeks to achieve objective IV of the study which is “to investigate the effect of IPO firms’ acquisition activity on the investment choices of IPO firms”

4.6 Investments in CapEx

Firms grow in two ways: one, they grow organically through investing in CapEx, and two, by taking up an acquisition-based strategy. The investment choice of IPO firms after listing is to invest in CapEx. Heavy investments are made in CapEx in order to grow organically. In the latter strategy, the growth is easier and faster. The research reported that IPO firms take acquisition-based growth in the first three years after going public. However, it is intriguing whether the acquisition activity hinders CapEx investment. As the firms go through the complex IPO process to get listed, the performing acquisitions demand high resources and bring structural changes in the IPO firms. Sustaining the structural changes and committing a high amount of resources evidently hinder the investment's organic growth.

This section deals with the investment choices of IPO firms and acquisition activity interaction. As discussed in Chapter III, Research Methodology, CapEx, is measured according to equation 3-6. This section begins with the descriptive of CapEx and then regression analysis results followed by discussion of results and findings.

4.6.1 Descriptives of CapEx of IPO Firms

Figure 4.40 illustrates the distribution of investment in CapEx by IPO firms in the first year of listing. The normal distribution depicts the CapEx intensity of IPO firms. The IPO firm's investment in CapEx is positive during the first year of listing. The peak of the

distribution is highly positive i.e. it is very much away from zero. It can be construed that the IPO firms are strongly investing in CapEx.

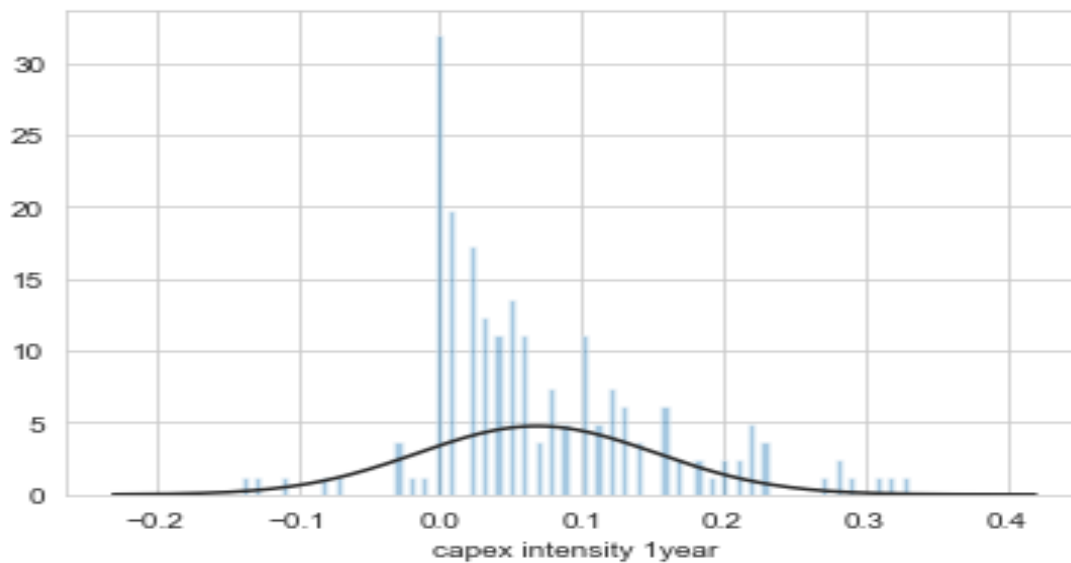


Figure 4.40 Distribution of Investment in Capex by IPO Firms in the First Year of Listing.

Figure 4.41 illustrates the distribution of investment in CapEx by IPO firms in the second year of listing. The normal distribution depicts the CapEx intensity of IPO firms. The CapEx intensity of IPO firms is positive in the second year of listing. The peak of the distribution is highly positive i.e. it is also very much away from zero in the second year. It can be construed that IPO firms continue to invest strongly in CapEx in the second year.

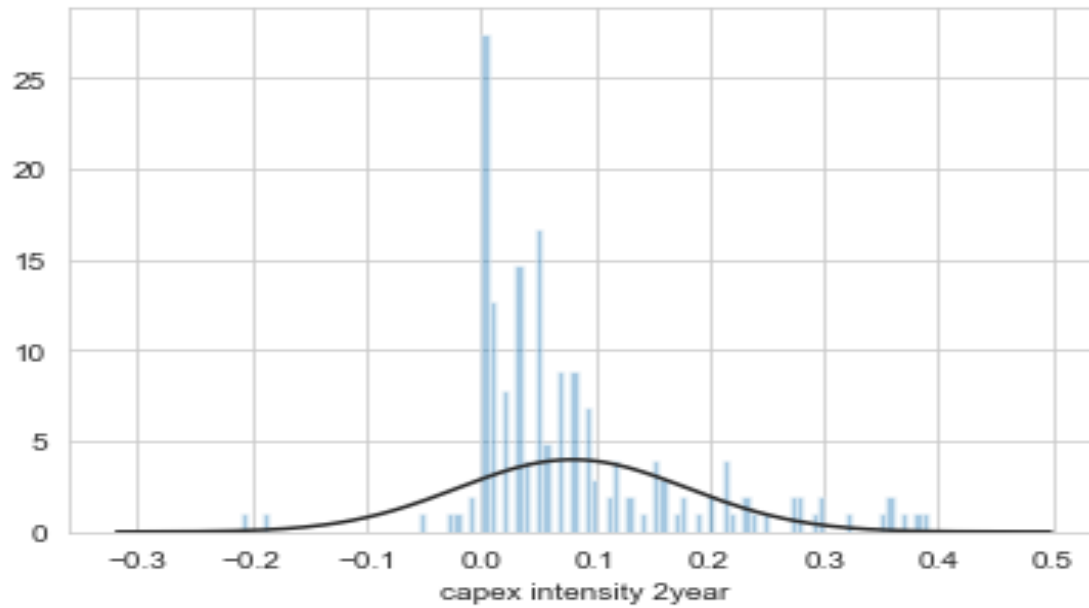


Figure 4.41 Distribution of Investment in Capex by IPO Firms in the Second Year of Listing.

Figure 4.42 illustrates the distribution of investment in CapEx by IPO firms in the third year of listing. The normal distribution depicts the CapEx intensity of IPO firms. The CapEx intensity of IPO firms is positive in the second year of listing. The distribution peak is positive, i.e. it is slightly away from zero in the second year. It can be interpreted that CapEx intensity has decreased in the third year of listing.

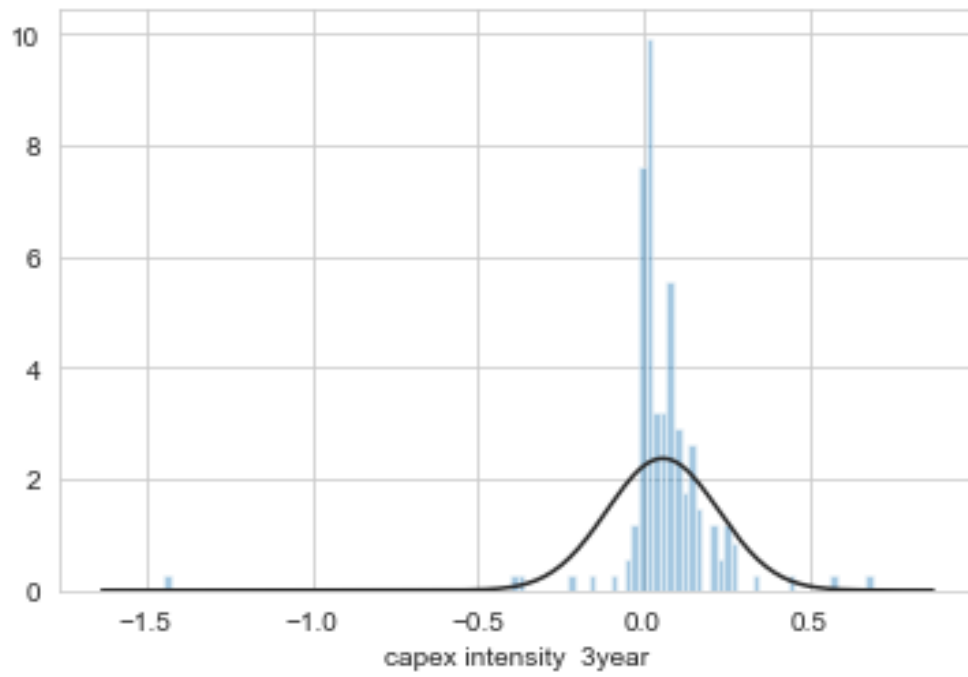


Figure 4.42 Distribution of Investment in Capex by IPO Firms in the Third Year of Listing.

Table 4.7 Regressional analysis results of acquisition activity's influence on CapEx Intensity.

Dependent variable		B	Std. Error	T	Sig.
Capex intensity 1year	Intercept	.128	.020	6.514	.000
	Acquisition_dummy	-.020	.011	-1.807	.071*
	Age	-.001	.000	-2.269	.024
	Issue expensers Crores	-.001	.000	-3.362	.001
	Issue size crores	-7.018E-008	6.966E-006	-.010	.992
	Underpricing	.003	.006	.547	.585
	PE ratio	-2.291E-006	4.450E-006	-.515	.607
	Promoter holding post IPO	-1.980E-005	.000	-.064	.949
Capex intensity 2year	Intercept	.153	.021	7.432	.000
	Acquisition_dummy	-.017	.012	-1.427	.154
	Age	-.001	.000	-2.959	.003
	Issue expensers Crores	-.001	.000	-2.531	.012
	Issue sizers crores	3.669E-006	7.286E-006	.504	.615
	Underpricing	-.006	.006	-.890	.374
	PE ratio	-3.543E-006	4.654E-006	-.761	.447
	Promoter holding post IPO	.000	.000	-.973	.331
Capex intensity 3year	Intercept	.097	.021	4.664	.000
	Acquisition dummy	-.016	.012	-1.371	.171
	Age	.000	.000	-1.074	.283
	Issue expensers Crores	.000	.000	-.874	.382
	Issue size crores	2.454E-006	7.358E-006	.333	.739

	Underpricing	-8.817E-005	.006	-.014	.989
	PE ratio	-3.059E-006	4.700E-006	-.651	.515
	Promoter holding post-IPO	.000	.000	-.821	.412
R square CapEx 1 st year	0.063				
Adj R square CapEx 1 st year	0.051				
R square CapEx 2 nd year	0.031				
Adj R square CapEx 2 nd year	0.018				
R square CapEx 3 rd year	0.08				
Adj R square CapEx 3 rd year	0.05				

***- 1% level of significance, **- 5% level of significance and *-10% level of significance

CapEx intensity is the dependent variable. Acquisition activity is used as a dummy variable. Other influencing variables are Age, Issue expense, Issue size, Underpricing, PE ratio, and Post-IPO promoter holding, are included while running the regression analysis.

4.6.1.1 Results

Table 4.9 reports the regression results of acquisition activity influence on CapEx intensity among the IPO firms. Acquisition activity influence on CapEX intensity is not significant. However, the beta values are negative. The age of the firm influences CapEx intensity negatively. All other variables are insignificant in explaining CapEx intensity.

4.6.1.2 Findings

The capital expenditure invested by IPO acquirer and non-acquirer firms differ less significantly in the first year, and it has no influence on CapEx in the later years. Since the beta is negative, it can be surmised that the acquisition activity demands a considerable outlay of capital, and this hinders the investment in capital expenditure. As the age of the firm

increases, there won't be new investment in capital expenditure since older firms would have their CapEx already in place.

CHAPTER 5

5 Conclusion

The study has examined the influence of acquisition activity on the performance of listed IPOs, and the investment choice of the newly listed firms. The study is divided into four sections. Each section deals with one of the objectives of the study. The first section investigated the impact of acquisition activity on the stock performance of new public firms. The second section examined the influence of grading activity on the stock performance of the IPO acquirer firms. The third section dealt with the impact of acquisition activity on the operating performance of the IPOs. The last section illustrated the impact of acquisition activity on the investment choices of the firms.

The results of the first objective showed that the impact of acquisition activity is significant, and the beta values are positive in the first, second, and third years. It can be interpreted that the acquisition activity is positively influencing the stock performance of IPO firms. The investors perceive that the acquisition activity of IPO acquirers firms would increase their wealth. These results are in line with the findings of (Arikan & Stulz, 2016; Bessler & Zimmermann, 2011). Other variables, such as the stock market returns positively influence the performance of IPOs (Deb & Marisetty, 2010), and the age of the firm reflects similar influence.

The results of the second objective revealed that the grading significantly influences the performance of IPO acquirers, and the results also report a negative beta. This explains that IPO grading has a negative influence on the performance of IPO acquirers.

The outcomes of the third objective revealed that acquisition activity significantly influences the operating performance of IPOs in the first and second years, but the impact disappears in the third year. The acquisition activity positively influences the operating

performance of IPOs. The study showed that acquisition activity taken up by IPO firms increases the operational efficiency. IPO firms make value-enhancing acquisitions (Arikan & Stulz, 2016; Loderer & Martin, 1992) that are manifested in the operating performance of IPO acquirer. The operating performance of IPO acquirers is translated into the stock performance, that is discussed above. Institutional investors' subscription has a significant and positive impact on operating performance. The age of the firm is significant, and it negatively affects the operating performance of the firm.

The final objective of the study looked at the impact of acquisition activity on CapEx investment. The results revealed that the acquisition activity does not significantly impact the CapEx intensity, but the beta values are negative. The acquisition activity negatively influences the CapEx intensity but not significantly. IPO firm that goes for acquisition commits a huge outlay of capital while acquiring the firm, and concurrent investment in CapEx is a difficult task for the firms. However, the results showed that IPO acquiring firms are investing on par with IPO non-acquiring in CapEx (Wiggenhorn et al., 2007).

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IPO Firms Subsequent Acquisition Activity and IPO Underperformance

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ABSTRACT

We examine the IPO firm's acquisition activity influence on the long-run performance of IPO during 1994-2015. We find that the IPO acquiring firms are generating positive abnormal returns for the first 2 years of going public and in the third, these firms generate negative abnormal returns, but they perform better than the non-acquiring IPO firms. We further investigate influence acquiring by introducing other factors which influence the performance of IPO, we find that the acquisition activity was not significant or weakly significant and beta values to be positive. We conclude that the investors are confident that the acquisition activity of IPO firms are value enhancing which otherwise believed.

Keywords: IPO Acquirer, *BHAR*, Long-run Performance

JEL Classifications: G24, G34

1. INTRODUCTION

Do IPO firms subsequent acquisition activity influence the long-run underperformance of IPOs? This intrigues from the studies of Brau et al. (2012) and Bessler and Zimmermann (2011), Brau et al. (2012) analysed 3547 US IPOs to determine the impact of the acquisition activity on the performance and reported that the firms which went for acquisitions generated negative returns more than double of that firms which didn't went for acquisitions. Bessler and Zimmermann (2011) reported by investigating 2679 IPOs issued during 1996-2010 in Europe to study the influence of acquisition activity on the IPO firms performance and conclude that the IPO firm's performance which went for acquisition was not significantly different from the IPO non-acquirer firm. Wiggenhorn et al. (2007) reported similar findings that IPO acquirer firms performance was not significantly different from the IPO non-acquirer firm. The present study tests the influence of acquisition activity of IPO firms on the overall IPOs performance in an emerging economy like India.

Indian financial markets are not mature as compared to the western financial markets. They are constantly evolving, to protect the interests of investors. IPO process especially are unique among the other primary markets around the world; it is one of the most transparent process in the world. Securities and Exchange Board of India (SEBI) guidelines direct the IPO allocation as per set rules i.e., 50% to the institutional, 15% to the high net worth and 35% to the retail investors. SEBI guidelines direct the investment banker or underwriter to maintain transparency in terms of price and demand expressed by the institutional investors. Almost all IPOs in India are oversubscribed; this depicts the overreaction of Indian investors towards the public issue. Information asymmetry due to the institutional voids clubbed with the poor financial literacy among the investor's magnitude of underpricing is very high. Marisetty and Subrahmanyam (2010) in their study reported that underpricing of IPOs issued during 1996-2006 is 100% on an average.

M&A literature on the long run performance of acquiring firm is divided. Loughran and Vijh (1997) in their study reports that

acquirer underperforms in the long run. One of the explanations for poorer performance is the hubris hypothesis (Roll, 1986). According Roll (Roll, 1986) managers overconfidence leads them to overestimate the synergistic benefits derived from the acquisition. So they tempt to pay more for the acquisitions which result in the poorer operational performance which ultimately reflected in stock price. Krishnan et al. (2007) conclude that premium paid to the target on its fundamental value leads to the negative performance of the firm. Yang et al. (2019) using Chinese M&A took place during 1998-2015 document that the cash acquisitions are underperforming both in short and long-run, method of payment seems to be not significant, even stock financed M&As performing poorly in long-run (Savor and Lu, 2009). Contrasting finding has been reported by Arikan and Stulz (2016) in their study that the acquirers perform better by taking up wealth creating acquisitions. Loderer and Martin (1992)¹ in their reported that the acquiring firms didn't generate negative returns after acquisition.

IPO firms are prolific acquirers, whether desire to acquire driving firms to go public or after going public opens avenues to acquire remains puzzle. A partial explanation to this puzzle can get from the study of Brau and Fawcett (2006) from the survey done 338 CFOs to find the primary motivation to go public and reported that most of the CFOs answered primary motivation to go public is to acquire a firm. Celikyurt et al. (2010) explains that the recent capital infusion and availability of acquisition currency are driving the newly public firm to take up acquisitions more than the rate of mature firms. It is also observed that newly public which went for acquisitions are investing heavily in acquisition rather than on CapEx or R and D relatively to the non-acquiring firms.

Considering the strong desire of newly public firm to pursue an acquisition and contrasting findings of acquisition performance, we examine whether IPO firm's desire to acquire influence the long-run performance of overall IPO firms. And taking in to account the Indian financial system it should be more pronounced than the western studies due to institutional voids and low financial literacy. As per our knowledge, this study is first to explore acquisition activities of IPO firms and performance of IPOs in emerging economies like India.

The rest of the paper is divided into the following sections. Section I deals with the data and methodology. Section II deals with the results. Section III explains the conclusion.

2. DATA AND METHODOLOGY

2.1. Data

Sample data consists of IPOs which got listed on NSE from 1994-2015. We obtained the IPO data from the NSE website and post-IPO financials we used CMIE prowest database. The initial sample collected from the NSE website has 424 IPOs out of which few IPOs withdrawn, so the sample pruned to 396. From the 396 sample of IPOs, financials available with the prowest were 374. We define

IPO acquirer firm as any firm which pursues acquisitions within 3 years of time after going public. We consider only acquisitions which are completed within 3 years after going public.

Descriptive statistics about the data are provided in Table 1. The largest number of IPOs is issued in the year 2007. Only one IPO issued in the year 1999. The amount of IPOs issued through the book building process quite few before 2005. After 2005 most of the IPOs are issued through the book building process. They are clustering of IPOs during 2006, 2007 and 2010 marked as the hot market where the market is optimistic. Panel B reports details of the sample. This study covers a total sample of 374 IPOs which are issued through the book building process listed on NSE. The sample covers the issues during 1994-2015, the duration of the sample falls between the mandatory grading period, i.e., from 2007 to 2014. IPO grading was made compulsory by the SEBI in 2007 but later it was made option in 2014. Grading was based on fundamentals of firms; it was in the range of 1 to 5, 1 for the poor and 5 for the best fundamentals. There are 88 firms which went for the acquisitions within 3 years span of time after going IPO, out of which 24 are graded, and 64 are non-graded firms.

2.2. Methodology

To analyse the data we use event study methodology, we employed the *BHAR* model to find whether firms generate abnormal returns in the long-run. For measuring long-run returns, *BHAR* model is better than the *CAR* model (Barber and Lyon, 1997). We define a month as 21 trading days and year as 252 trading days as used by (Ritter, 1991).

$$r_{it} = r_t - r_0$$

$$BHR_i = \prod_{t=1}^{36} (1 + r_{it}) \quad (1)$$

We compute three buy hold returns by the above equation, where " r_{it} ", by the difference of raw returns of the firm " i " first closing price with the closing price at the time point " t ." Raw returns are calculated up to 36 months from the day of listing or to the date of delisting. NSE 500 has been used as a benchmark to calculate the abnormal returns.

$$BHAR_i = \prod_{t=1}^{36} (1 + r_{it}) - \prod_{t=1}^{36} (1 + r_{mt}) \quad (2)$$

Table 1: Reports the details of sample IPOs listed during Jan 1994-Dec2015

Sample	January 1994-December 2015
Total of IPO	374
Graded IPOs	124
Non-graded IPOs	350
Total acquiring IPO firms	88
Graded acquiring IPO firms	24
Non-graded acquiring firms	64

The data was collected from NSE which went for IPOs through book building process only during 1994-2015, and further criteria were data of those IPOs should be available data in CMIE prowest IQ

¹ They reported negative returns of acquirer in second and third year after acquisition which significant in 1960s but eventually disappeared by 1980s.

To study the influence of acquisition activity on the performance of IPO, we employed multivariate regression model.

$$BHAR_i = \alpha_0 + \beta_1 acqdummy + \beta_0 x_i \quad (3)$$

BHAR returns are used as a dependent variable, “acqdummy” is the dummy variable where if there is acquisition activity it is given “1” value otherwise “0.” X_i is other control variables which influence the performance of the firm.

We identify determinants from the existing literature which influence the performance of the IPOs. Issue size has been as a control variable in many studies (Deb and Marisetty, 2010; Jain and Kini, 1999). We use age as a log of 1+ age as the control variable. Other variables include promoter holding, non-promoter holding, grading as a dummy variable where grading above three is given “1” or else “zero” and market capitalisation as control variables.

3. RESULTS

As reported in Table 2, overall sample performance of the IPOs during the 1st year the mean abnormal returns are positive, but the

Table 2: Reports the mean abnormal returns of overall IPOs, IPO acquirer firms and IPO non-acquirer firms for three after going IPO

Variable	Overall IPO	Acquiring firms	Non-acquiring firms
	Mean value	Mean value	Mean value
1 year abnormal returns	0.0225	0.1190	-0.0131
2 nd year abnormal returns	-0.0714	0.0830	-0.1284
3 rd year abnormal returns	-0.1130	-0.0388	-0.1407

Table 3: Reports mean of control variables

Variable	Overall sample	Non-acquirer	Acquirer
	Mean	Mean	Mean
Issue size (millions)	1175.6025	1269.9016	914.6353
Age (years)	17.5864	18.5000	15.0581
Sales (millions)	5733.1698	5084.1660	7529.2500
Listing day returns	0.3602	0.3474	0.3957
Ownership (%)	59.5031	59.4546	59.6371
Market cap (millions)	40448.7928	34758.3233	56196.8363
Ownership non-promoter (%)	12.1254	11.6120	13.5464

Age of the firms is calculated from the year of incorporation to the date of listing. The issue size is the proceeds firm received from the IPO. Sales, ownership both promoter and non-promoter and market cap data is collected fiscal year following the IPO. Listing day returns are calculated as the difference between listing day closing and offer price whole divided by offer price

IPO non-acquirer firms performance is negative while IPO acquirer firms performance is positive in the 1st year. It can be interpreted that the high-quality firms are going for acquisition; that's the reason why the IPO acquirer are yielding positive returns. While the overall sample of IPOs and IPO non-acquirer sample generate negative abnormal both second and 3rd year but IPO acquirer firm are generating negative abnormal returns in 3rd year only. Mean performance of IPO acquirer firms are positive in the 2nd year, and average underperformance of IPO acquirer firms is less than that of IPO non-acquirer firm's underperformance. The results depict that the investors perceive that the IPO acquirer firms are making synergy building acquisitions, so they retain confidence in those firms.

We further examine the results by introducing other variables which influence the performance of the IPO firms after going public. We use a multivariate regression model to evaluate the influence of acquisition activity on the IPO firm's performance. Table 3 reports the mean of the issue size (Millions), age (Years), sales (millions), listing day returns, ownership (%), market cap (millions) and ownership non-promoter (%). Mean issue size of the acquiring firm is less than that of non-acquiring but rest of all variables are better than non-acquiring firms. Underpricing is more among the acquiring firms; this might due to get subscribe fully to tap the capital market to pursue the acquisitions (Amor and Kooli, 2013). IPO acquiring firms have strong sales; they are high performing firms. Market valuation of the acquiring firm is

Table 4: Reports the beta value and significance level values of various variables

Dependent variable	Parameter	B	Sig.
1 year returns	Intercept	-0.747	0.008
	Issue size	8.434E-006	0.422
	Grading dummy	-0.116	0.298
	Acquisitons	0.109	0.321
	Sales in millions	1.542E-006	0.635
	Ownership (promoter)	0.006	0.071
	Ownership (non-promoter)	0.021	0.000
	Market cap	-6.717E-007	0.290
	Listing day returns	0.000	0.607
	Age	0.074	0.300
2 nd year returns	Intercept	-1.131	0.000
	Issue size	8.161E-006	0.448
	Grading dummy	-0.023	0.843
	Acquisitons	0.217	0.055
	Sales in millions	1.408E-006	0.672
	Ownership (promoter)	0.006	0.074
	Ownership (non-promoter)	0.019	0.000
	Market cap	-6.831E-007	0.293
	Listing day returns	0.000	0.515
	Age	0.174	0.018
3 rd returns	Intercept	-1.179	0.000
	Issue size	8.041E-006	0.444
	Grading dummy	0.017	0.880
	Acquisitons	0.122	0.267
	Sales in millions	2.561E-006	0.431
	Ownership (promoter)	0.005	0.093
	Ownership (non-promoter)	0.014	0.003
	Market cap	-7.485E-007	0.239
	Listing day returns	0.000	0.314
	Age	0.213	0.003

quite high than non-acquirer. Non-promoter holding in acquiring firms is high; this can be construed that IPO firms are making value-enhancing acquisitions to protect their investment.

Table 4 reports the multivariate analysis results for the abnormal returns generated during the 1st, 2nd and 3rd year. The analysis report there is no significant impact of the acquisition on the performance of the IPO firms subsequently after IPO for the 1st and 3rd year, but in the 2nd year, it is significant at 10%. The acquisition has the positive beta value which shows that investors are confident that the acquisitions of the IPO firms are value improving, this finding is inline with the studies (Arikan and Stulz, 2016; Bessler and Zimmermann, 2011; Wiggenhorn et al., 2007). Arikan and Stulz (2016) reported that the young firm's performance subsequently was better than that of mature firms. In their study define young firms as the which are acquiring within a 4 year subsequently after going public. Non-promoter or institutional investor holding seems to be significant in the 3 years, institutional investors have superior information about the firm hence their trading activity is closely watch by the retail investor. Retail investors react swiftly to the trading of institutional investors. Promoter holding weakly significant at 10% and positive. It is in line with the earlier studies (Craswell et al., 1997; Lichtenberg and Pushner, 1994). The findings report that the acquisition activity of IPO firms subsequently after going public does not explain the underperformance of the IPOs in long-run.

4. CONCLUSION

The present study provides evidence that acquisition activity doesn't explain the underperformance of the IPOs. The abnormal returns of the acquiring firms in the first 2 years is positive and overall IPOs in the 1st year doesn't generate the negative abnormal which is contrasting from the western scenario, similar findings was reported by Kumar (2007). Investors in India see the acquisitions as value-enhancing deals hence the IPO firm's abnormal returns are positive or less negative returns than that of non-acquirers in the 3rd year.

Multivariate analysis was performed to investigate the acquisition activity influence on IPOs by controlling the other influence factors like age, issue size, grading, promoter, non-promoter holding, sales, market cap and listing day returns or under-pricing. After controlling these factors, the acquisition was not significantly influencing the IPOs performance. It was weakly significant at 10%. Overall the acquisition activity does not affect the performance of the IPOs. This study contributes to the literature by testing the relationship between acquisition activity of IPO and overall IPO performance, acquisition activity are positively contributing to the IPO acquirer performance which in contrast with the (Brau et al., 2012). Retail investors in India perceive acquisitions as value adding both in short run and long run, they perform positively over and above the market returns (Chakrabarti, 2007). Non-promoter or institutional investors holding found to be significant in the study, this shows that the retail investors in emerging economies like India follow the buying behaviour institutional investors because lack of financial literacy and mature institutions, retail investors follow the institutional investor's holdings in the hunch that they

have superior information about a firm. Further researchers can delve by taking fixed and book building IPOs and check the results.

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