MASTER THESIS

The short-term stock market reaction to cross-border M&As and the impact of the asset seeking motive: The case of Indian firms

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Preface

This thesis serves as the last stage of the Master of Science programme in Business Administration with a specialization in Financial Management at the University of Twente. I have learned a lot during this master. However, the journey to gain knowledge will continue.

I would like to offer my gratitude to University of Twente for providing a stimulating environment. In addition, I would like to thank my supervisors prof. Rez Kabir and dr. Henry van Beusichem for their useful feedback. Moreover, I would like to thank all the other staff at the University of Twente that helped me making this master a success. I would also like to thank my relatives and friends who supported and encouraged me during my time at the University of Twente, without them this would not have been such an enjoyable experience.

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Abstract

During the last decade the number and value of cross-border M&As by emerging market firms has increased. This thesis examines the stock market reaction to Indian cross-border M&A announcements and the impact of the strategic asset seeking motive on this stock market reaction using the event study methodology and OLS regression models. I find support for a positive stock market reaction, i.e., positive cumulative abnormal returns. A positive impact of the strategic asset seeking motive is only partly supported. There is support for the positive impact of the target being located in a developed country. However, there is no support for the positive impact of the bidder being active in the service sector. There is also no support for a positive association between the level of technology exports in the host country and cumulative abnormal returns.

Keywords: M&A performance; international acquisitions; value creation; emerging markets; India; strategic asset seeking motive; resource-based theory

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1. Introduction

1.1 Background and research questions

During the last decade, increased attention has been paid to cross-border mergers and acquisitions (M&As). Since 2009 the total value of cross-border mergers and acquisitions worldwide has increased notably, which can be seen in figure 1. Furthermore, figure 1 shows that the number of cross-border M&A deals did not change much since the 2008 financial crisis. The figure also shows that both the number and the value of cross-border M&A deals had risen in the years before the financial crisis of 2008. Steve Krouskos, global vice chair of transaction advisory services at Big Four accountancy firm EY, noted that "Earnings are strong and every firm is actively managing their portfolio. There is more and more cross-border activity, firms are having to acquire as technology threatens their business model and private equity is back in a big way. I think it will be a great year, one of the top three if not a record" (Clarke, 2018). These expectations, expressed by Steve Krouskos increase the importance regarding the effects of cross-border M&As. Furthermore, they raise several questions for managers of firms. Have cross-border M&As increased profits in the past years? What has been the stock market reaction of investors to cross-border M&As? How have other stakeholders reacted to cross-border M&As? These are some pertinent questions managers can ask themselves, to assess the merits and potential downsides of future cross-border M&As for their firms.

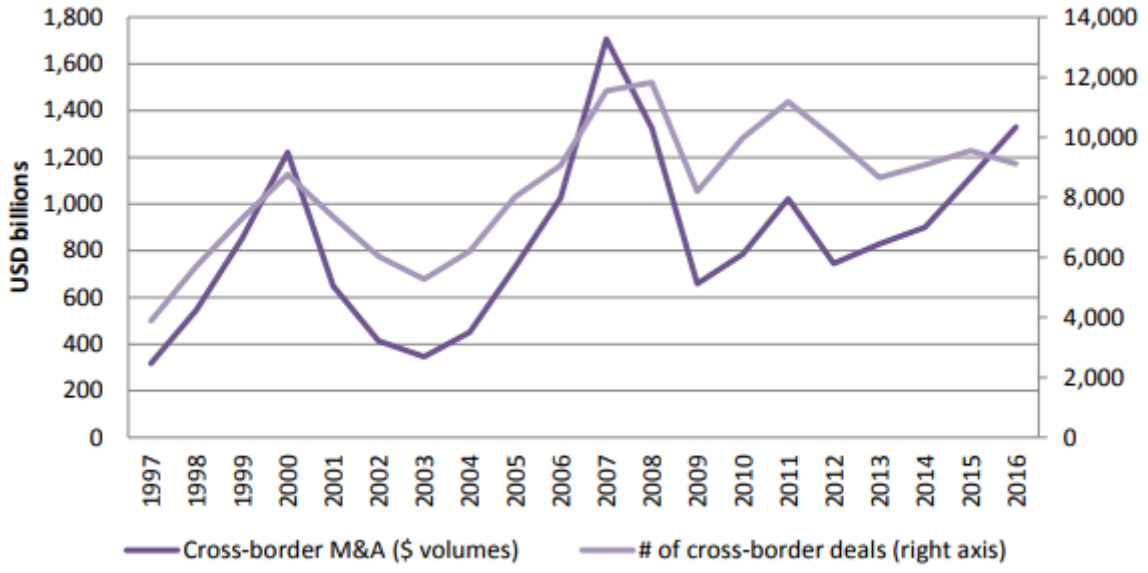

Figure 1. Global cross-border M&A, values and number of deals. Reprinted from OECD (2017)

More specifically, according to the UNCTAD database, the number of cross-border M&As initiated by firms from developed economies peaked in the years 2007 and 2008. In 2009 the number of deals decreased. In 2010 the number of cross-border deals by developed countries increased slightly and remained stable in the following years. However, upon examining the value of cross-border M&A deals, another trend can be observed. The value of cross-border M&A deals by developed countries also peaked around 2007 and 2008 and decreased in 2009, but since 2013 there is an upward trend (UNCTAD, 2018). A well-known example of a big cross-border M&A deal by a firm from a developed country was the acquisition of the British SABMiller by the world's largest brewer, Belgian Anheuser-Busch InBev, for about 104 billion U.S. dollars in 2015 (Bray & de la Merced, 2015). Another example is the 80 billion U.S. dollar merger between the German gas group Linde AG and the American Praxair (Reuters, 2018). Furthermore, in 2018 Vodafone took over Liberty Global, a provider in Germany and eastern Europe, for 21.8 billion U.S. dollars (Osborne, 2018). An example from the Netherlands is the acquisition of the British BG Group by Royal Dutch Shell for 52 billion U.S. dollars in 2016 (Bousso, 2016).

Moreover, firms from emerging markets have increasingly used cross-border mergers and acquisitions during the last decades (Deng & Yang, 2015). According to the UNCTAD database, in 2009 there was a slight drop in number and value of cross-border M&A deals from emerging markets, but these figures have increased noticeably in the following years. In 2016 a very large takeover by a Chinese firm was announced, ChemChina would acquire the Swiss Syngenta (Tsang, 2017). In 2017 shareholders of Syngenta approved the deal of 43 billion U.S. dollars (Het Financieele Dagblad, 2017). A famous example from India is the acquisition of the British firm Jaguar Cars by the Indian vehicle maker Tata Motors in 2008 (Chandran, 2008). Another example is India's largest mobile service company, Bharti Airtel, acquiring the African Mobile Telecommunications Company, known as Zain Africa, for approximately 10.7 billion U.S. dollars in 2010 (Reuters, 2010). There are also instances from the Brazilian market. One of them is the acquisition of the American fruit producer Chiquita by the Brazilian juice maker Grupo Cutrale and investment firm Safra Group (Parra-Bernal & Ramakrhisnan, 2014). These are just a few examples of cross-border M&As by firms from emerging markets.

Previous studies, in which the effect of cross-border M&As by developed market firms on M&A performance was examined, mostly show a positive effect (Lowinski et al., 2004; Mateev, 2017; Moeller and Schlingemann, 2005), while a few find a negative effect (Aw &

Chatterjee, 2004). Lowinski et al. (2004) find this effect to be positive for cross-border M&As from Switzerland using a cross-border sample of 91 deals. Mateev (2017), who found a positive effect of M&A announcements on stockholder value, used a sample of 2823 M&A deals initiated by firms from different European countries. Moeller and Schlingemann (2005) studied U.S. firms and found this effect to be significantly positive only for one out of the three tested time periods. They used 102 deals in that particular time period, while using 383 and 281 deals for the two time periods which lead to insignificant results. However, Aw and Chatterjee (2004) find that UK firms acquiring 77 large targets from developed markets experience negative cumulative abnormal returns for deals closed in the period 1991-1996.

Empirical evidence, about the announcement returns of cross-border deals from emerging market studies is ambiguous regarding the effect of cross-border M&A deals on stock market performance (Aybar and Ficici, 2009; Chen and Young, 2010; Gubbi et al., 2010; Kohli & Mann, 2012; Nicholson & Salaber, 2013; Ning et al., 2014, & Tao et al., 2017). Multiple studies found a positive relation between the announcement of M&A deals and stock market performance (Gubbi et al., 2010; Kohli & Mann, 2012; Nicholson & Salaber, 2013; Ning et al., 2014, & Tao et al., 2017). Gubbi et al. (2010) studied 425 Indian acquiring firms and Tao et al. (2017) studied 165 Chinese acquiring firms. Kohli and Mann (2012) had a subsample of 202 cross-border deals, announced from 1997 through 2008. Nicholson and Salaber (2013) studied 63 Chinese and 203 Indian firms and Ning et al. (2014) studied 335 Chinese acquirers. However, Chen and Young (2010) and Aybar and Ficici (2009) found a negative effect. Chen and Young (2010) and Aybar and Ficici (2009) found this effect to be negative using samples of respectively 39 deals by Indian firms and 433 deals by 58 emerging-market firms.

M&A studies suggest that M&As can be motivated by several value-increasing and value-decreasing factors (Weitzel & McCarthy, 2011), but multiple emerging market studies argue that emerging market firms are mainly motivated by strategic asset seeking (Athreye & Kapur, 2009; Luo & Tung, 2007). The resource-based theory explains that firms acquire a foreign firm to access strategic assets, these strategic assets can lead to a sustainable advantage and increased performance (Cui & Jiang, 2009). However, the question remains whether cross-border M&As from Indian markets motivated by strategic asset seeking indeed increase performance. Managers of Indian firms should know if strategic asset seeking with cross-border M&As is a good means to increase the abnormal return, because abnormal return is a decent measure for acquisition performance (Gubbi & Elango, 2016). On top of that, stock market reactions

express the shareholders' expectations of M&As; since shareholders can decide upon the completion of an M&A, stock market reactions are in the interest of the firm's management. Lim and Lee (2017) found that there is an inverted U-shaped relationship between M&A announcement returns and the completion of M&A deals. In addition, this strategic asset seeking motive is interesting since it is the main motive for cross-border M&As by firms from emerging markets like India (Athreye & Kapur, 2009; Luo & Tung, 2007). Only two studies have focused on this question. Nicholson and Salaber (2013) and Gubbi et al. (2010) found that M&A deals triggered by the asset seeking motive benefit more from M&A announcements.

This thesis tries to clarify how the strategic asset seeking motive affects short-term cross-border M&A announcement returns for Indian market firms. In order to reach this goal, I examine the following research questions:

1. *What is the short-term stock market reaction to cross-border M&A announcements by Indian firms?*
2. *What is the impact of the strategic asset seeking motive on the short-term stock market reaction to cross-border M&A announcements by Indian firms?*

To address these research questions, this thesis is built on the synergy theory, internalization theory, and resource-based theory. To test research question 1 the event study methodology is used, more specifically the market model and the market-adjusted return method. Research question 2 is tested using OLS regressions, in addition to the event study methodology. Three proxies are used for the strategic asset seeking motive, namely the dummy variable service sector bidder, level of technology in the host country, and the dummy variable target located in a developed country.

This thesis provides support for a positive stock market reaction to cross-border M&A announcements by Indian firms. Regarding the impact of the strategic asset seeking motive, there is partly support for a positive impact. I find a positive impact of the target being located in a developed country on the stock market reaction. However, there is no higher stock market reaction found for service sector bidders, which have a competitive advantage. There is also no support for a positive association between the level of technology exports in the host country and the stock market reaction.

1.2 Contribution

This thesis contributes to the academic literature by confirming that targeting firms in developed countries leads to higher abnormal returns for Indian acquirers using more recent data compared to existing studies. The data I use ranges from January 2008 until December 2016. Nicholson and Salaber (2013), who studied Indian firms, used data of firms that announced M&A deals between 2000 and 2010. The data used by Gubbi et al. (2010), who also studied Indian firms, are from an even earlier period. They used data of firms, which announced M&A deals between 2000 and 2007. It is valuable to use a more recent sample testing this theory for Indian firms, because quite some changes have occurred in India. The following changes in India during the last decade are relevant. The gross domestic product (GDP) has increased in India (IMF, n.d.). In addition, the economic relations between India and other countries have improved, which gives room for more cross-border trade and investments (Prahalathan et al., 2014). Besides that, the manufacturing sector has become a less popular target for Indian firms, when acquiring a foreign firm. Industries that have become more targeted include real estate and business services, wholesale, restaurants, and hotels (Prahalathan et al., 2014). In the period 2010-2014, the percentage of developing countries as a host country for Indian outward foreign direct investments increased to 59.9 percent compared to 47.0 percent in the period 2000-2009 (Pradhan, 2017). Furthermore, some of the characteristics of Indian firms, which invest in other firms abroad, have changed. The share of large firms has increased from 64.4 percent during 1980−89 to 83.6 percent during the period 2010−14 (Pradhan, 2017).

I use the level of technology exports in the host country as a proxy for the predictor 'strategic asset seeking'. This proxy has not been used thus far to examine M&A announcement returns. The data does not provide support for a significant impact of the level of high-technology in the host country on stock market reactions to cross-border M&A announcements. In addition, there is no support for higher stock market reactions for service sector acquirers, which have a competitive advantage. However, the data does provide support for a positive impact of targeting developed countries on acquirers' returns. Finally, this thesis provides support for a positive mean and median stock market-reaction to cross-border M&A announcements made by Indian firms in recent years.

In the following, management contributions are found. The mean and median stock market reactions to cross-border M&A announcements by Indian firms are positive. This means that

the shareholders' expectations of M&As are generally positive; since shareholders can decide upon the completion of M&As, this is very relevant for managers. Higher stock market reactions can be achieved when the targeting firms are located in developed countries. However, the impact of the level of high-technology exports in the host country, which has not been studied before as a moderator of stock market reactions, is found to be insignificant. In addition, bidders in the service sector, which have a competitive advantage, do not retain higher returns than other bidders. Managers of firms that are considering acquiring a foreign firm should be cautious when not targeting a developed country. Being a service sector firm or targeting a country with a high level of high-technology is not enough for the stock market to react more positively to a cross-border M&A announcement.

1.3 Study structure

This thesis is structured as follows: chapter 2 reviews the literature and formulates the hypotheses. In chapter 3 the methodology and data are discussed. Chapter 4 contains the results, while chapter 5 contains the conclusion and limitations.

2. Literature review and hypotheses

2.1 M&A concept

The term M&As is used for mergers and acquisitions. While the rest of this thesis does not distinguish between mergers and acquisitions, in this section the two terms are defined separately.

Mergers can be defined in the following ways. “By mergers we mean the transfer of the assets of at least one corporation to another corporation. Thus not less than two companies form one single company. The shareholders of the corporation(s), giving up their independence on account of the merger, exchange their capital shares for (newly created) capital shares of the merger firm” (Ossadnik, 1996, p. 42). Another definition of mergers is that mergers are transactions, in which two firms are combined into one new firm (Hillier et al., 2011). Ullrich et al. (2005) argue that there is always a power differential between the partners that merge into a new organization, because there is always an acquiring and an acquired organization. Even with mergers of equals, one partner is more influential in creating the new firm. Therefore, there is always a distinction between a bidder or acquiring firm and a target or acquired firm.

Acquisitions can be defined in the following ways. An acquisition is a transaction in which one firm purchases another firm (Hillier et al., 2011). According to Ullrich et al. (2005), “In an acquisition (‘fusion by integration’) one or more companies are taken over by another company, and their assets are also transferred to the acquiring company” (p, 1553). In contrast to mergers, acquisitions do not involve the establishment of a new organization. The target firm is integrated within the acquiring firm.

2.1.1 Types of M&As

There are multiple ways to categorize M&As, the most important categorizations are discussed here. Some studies base the categorizations of M&As on relatedness of the acquiring and acquired firm when studying the performance differences across different acquisition types (Chatterjee, 1986; Lubatkin, 1983; Montgomery & Wilson, 1986; Mateev, 2017; Nicholson & Salaber, 2013; Singh & Montgomery, 1987). Within the categorization based on relatedness some studies categorize M&As as being related and unrelated (Chatterjee, 1986; Mateev, 2017; Nicholson & Salaber, 2013; Singh & Montgomery 1987), while other studies are more specific

by using the Federal Trade Commission (FTC) scheme (Lubatkin, 1983; Montgomery & Wilson, 1986).

The FTC scheme classifies acquisitions based on the primary economic relationship between the bidder and target firm. According to the FTC scheme the following five categories are distinguished: horizontal, vertical, product extension, market extension, and unrelated acquisitions. The three latter types are also called conglomerate acquisitions. Horizontal acquisitions involve firms that operate in the same geographic market and produce one or more of the same, or closely related, products. Vertical acquisitions involve firms that potentially had a buyer-seller relationship before the M&A deal. Product extension acquisitions involve firms that are functionally related in production and/or distribution but offer products that do not compete directly with one another. Market extension acquisitions are acquisitions by bidding firms that offer the same products as the target firms in a different market than the target firm. With a market extension acquisition the acquirer can offer the products in markets that are new for the acquirer. Unrelated acquisitions are acquisitions of target firms that are essentially unrelated to the acquiring firm (Montgomery & Wilson, 1986).

Another way to categorize M&As is by dividing M&As into cross-border and domestic M&As. According to Lehto and Böckerman (2008), cross-border M&As are cases, in which the acquiring firm is foreign. However, I follow Shimizu et al. (2004) for the conceptual definition of cross-border M&As. Cross-border M&As are those M&A deals involving an acquiring firm and a target firm whose headquarters are located in different countries. In contrast, domestic M&As are M&As, in which the acquiring and the acquired firm's headquarters are located in the same country.

M&As are also often categorized as being friendly or hostile (Hillier et al., 2011). Following Franks and Mayer (1996), a hostile M&A is defined as "one in which the first offer is opposed by the incumbent management" (p.165). Similarly, Sudarsanam and Mahate (2006) define a hostile M&A as "one that is initially resisted by target management" (p. S9). Friendly M&As are the M&As in which acquirer and target managements agree to the M&A (Sudarsanam & Mahate, 2006).

2.2 M&A motives

Several considerations or motives can drive M&A deals. In the literature several M&A motives are distinguished. The most important ones are discussed in this section. Strategic asset seeking, foreign market seeking, synergy, agency, and hubris are discussed below. Amongst these motives strategic asset seeking and foreign market seeking are specific to cross-border M&A studies (Berkovitch and Narayanan, 1993; Buckley et al., 2009; Dunning, 1998; Franco et al., 2008; Goergen and Renneboog, 2004; Makino et al., 2002; Seth et al., 2000). First, the resource-based and internalization theory are discussed which explain the motives specific to cross-border M&As. A focus will be on the "strategic asset seeking motive" that is part of research question 2. Then the other motives which can also drive (cross-border) M&As are explained. Nguyen et al. (2012) find evidence in their study containing 3520 domestic acquisitions in the United States that single-motive acquisitions do not happen very often. Multiple motive acquisitions happen much more often. Approximately 80% of the 3520 sampled acquirers have multiple M&A motives.

Resource-based theory

Strategic asset seeking

The main motive for firms from emerging markets to acquire a foreign firm is strategic asset seeking, this motive can be explained with the resource-based theory (Athreye & Kapur, 2009; Luo & Tung, 2007). In the asset seeking perspective M&As are seen as a means "to acquire strategic assets (i.e., technology, R&D teams, marketing expertise, brand names and management expertise) available in a host country" (Makino et al., 2002, p. 404). According to Ivarsson and Jonsson (2003) in this perspective foreign investments are made "to augment [. . .] existing global technological competitive advantages through a feedback of information and by tapping into the knowledge generated by other firms" (p. 370). Deng (2009) defines strategic asset seeking as "obtaining and controlling strategic assets" (p. 75).

Strategic assets are defined as "the set of difficult to trade and imitate, scarce, appropriable and specialized resources and capabilities that bestow the firm's competitive advantage" (Amit & Schoemaker, 1993, p. 36). Resources are factors owned or controlled by the firm that can be converted into products using other firm assets. Examples of resources are knowhow, financial or physical assets, and human capital. Capabilities are a firm's capacity to utilize resources. Capabilities are "information-based, tangible or intangible processes that are firm specific and

are developed over time through complex interactions among the firm's resources" (Amit & Schoemaker, 1993, p. 35).

The resource-based view explains in the following way why firms seek strategic assets. Capabilities and resources, which are difficult or costly for other firms to obtain, are crucial for a firm's competitive advantage (Barney, 1991). According to the resource-based theory firms want to close M&A deals to get access to the resources (Cui & Jiang, 2009). They do this in order to compensate for deficiencies in resources needed for building competitiveness. Emerging market firms should acquire firms from developed countries to complement their own resources and capabilities with high-value capabilities and resources (Gubbi et al., 2010; Harrison et al., 2001). With cross-border acquisitions it is "reasonable to assume that the investing firm will transfer some knowledge and expertise to or from the target firm – unless the investment is made purely and simply for the purposes of a financial return – and that some of the potential gain from the FDI project will be reflected in a premium paid for the shares of the acquiring firm" (Ning et al, 2014, p. 2). According to Wernerfelt (1984) basing an acquisition on a rare resource, can *ceteris paribus* lead to maximization of the imperfection and an increase in returns. Furthermore, Barney (1991) argues that according to the resource-based theory, a firm's strategic assets determine its competitive advantage and performance.

Foreign market seeking

In addition, the resource-based view explains foreign market seeking, also called asset exploitation (Nicholson & Salaber, 2013). Foreign market seeking is another important motive for cross-border M&As (Buckley et al., 2016). Foreign market seeking is a phenomenon which is initiated by the drive of a firm to exploit their competitive advantages. When acquiring a foreign firm, the bidder gets access to the particular foreign market and offsets the additional costs related to operating in another country (Zaheer, 1995). The goal of foreign market seeking is to strengthen the position of the firm in existing or new foreign markets. However, foreign markets seeking does not involve strengthening the parent firm like with strategic asset seeking (Cui et al, 2014).

Internalization theory

The internalization theory is a general theory explaining the boundaries of organizations. However, the focus of this thesis is on its application to multinationals. According to the internalization theory, also known as the market imperfection perspective, structural market

imperfections lead to advantages of multinationals, i.e., some have a better ability to work in an industry (Buckley & Casson, 2009). Advantages in production factor markets, product markets, capital markets, and legal environments are distinguished in literature as the main driving forces for cross-border M&As (Eun et al., 1996; Matsusaka, 1996). These advantages take various forms including technology patents, economies of scale, distribution networks, and the ability to achieve product differentiation. Another advantage can be that imperfect capital markets allow firms to profit from favorable exchange rates. This can be done by moving operations abroad or by acquiring foreign firms (Cebenoyan et al. 1992; Froot & Stein, 1991; Kang, 1993).

These advantages in other markets lead to internalization via cross-border M&As. The internalization theory hypothesizes that firms with a high amount of intangible assets may benefit from exporting their intangibles beyond domestic borders if the alternative, writing contracts like licenses and franchise agreements in the external market, is complicated and costly. This motive is called forward internalization which is similar to the foreign market seeking motive. The internalization theory also explains the reverse internalization motive, which is similar to the strategic asset seeking motive (Eun et al., 1996; Steigner & Sutton, 2011). The internalization theory assumes rational action, internalization will only happen when expected benefits exceed expected costs. Hence, if shareholders share the same appraisal method then the share value of the investing firm will rise after the announcement of the cross-border M&A (Buckley & Casson, 2009; Buckley et al., 2016). Also Ning et al. (2014) argue that firms only invest across country borders if value creation is expected.

Empirical evidence cross-border M&As

Cantwell and Piscitello (1999) did a case study investigation of a sample of 40 of the largest U.S. and European multinationals across five broad industrial groups. They found that the largest multinationals utilize the internalization of technological development as a means of accessing innovation across national boundaries.

When looking at a broader concept, namely outward foreign direct investments (FDIs) which includes cross-border M&As among other investments, empirical evidence gives mixed support for strategic asset seeking as a motive for FDIs (Buckley et al., 2009). Buckley et al. (2009) study the determinants of Chinese outward foreign direct investments during the period 1984-

2001. They use annual patent registrations in the host country as a proxy for strategic asset seeking. They do not find support for the strategic asset seeking motive, they find that Chinese firms have not been motivated to acquire strategic intellectual capital assets during the tested period.

In addition, Buckley et al. (2009) use host country GDP per capita among others as a proxy for foreign market seeking. They find that this number is highly positively related to foreign direct investments in the subsample 1984-1991, which supports the view that foreign market seeking is an important motive. They also test the proxy China's exports to the host country. They find this to be positively correlated to foreign direct investment activity only for the subsample 1992-2001, the subsample 1984-1991 shows an insignificant positive relation. This gives partly support for foreign market seeking as a motive for outward FDIs. However, Ramasamy et al. (2012) find that the determinants of internationalization differ based on ownership. They find in their study of Chinese outward foreign direct investments that private firms in many cases are foreign market seekers, i.e., they exploit their assets and competitive advantage in other countries.

Empirical evidence cross-border M&As by Indian firms

Empirical evidence regarding M&As by Indian firms gives support for the view that the internalization theory and resource-based theory explain M&A decisions. Buckley et al. (2016) studied 2230 cross-border acquisitions by Indian firms to test whether strategic asset seeking and foreign market seeking are motives for cross-border M&As. They test six hypotheses based on the internalization theory and resource-based theory. Buckley et al. (2016) confirm four of the hypotheses. The hypothesis that is related to strategic asset seeking is confirmed. In addition, five of the hypotheses are related to foreign market seeking, Three of those five hypotheses are confirmed giving support for foreign market seeking as a motive that triggers firms to acquire firms over country borders.

Synergy

Synergy in business usage means "the ability of two or more units or companies to generate greater value working together than they could working apart" (Goold & Campbell, 1998). The synergy motive assumes that managers of targets and acquirers agree on M&A deals to maximize future cash flows and shareholder wealth and that they would engage in M&A

activity only if it results in gains to both sets of shareholders (Berkovitch & Narayanan, 1993; Hankir et al, 2011). However, several studies indicate that M&A deals do not per se lead to increased value (e.g., Gregory & O'Donohoe, 2014; Nicholson & Salaber, 2015). I distinguish three main types of synergy, namely operational synergy, financial synergy, and collusive synergy (Chatterjee, 1986).

Operational synergy is mostly relevant for related M&A deals and is generated by production efficiency. This efficiency can be achieved in the form of economies of scale. Another form of production efficiency can be achieved via economies of scope (Chatterjee, 1986). According to Panzar and Willig (1981) this form of synergy is explained by cost savings as a result from the scope of the firm. "There are economies of scope where it is less costly to combine two or more product lines in one firm than to produce them separate" (Panzar & Willig, 1981, p. 268). Operational synergy can also be accomplished with the transfer of knowledge (Trautwein, 1990).

Financial synergy can be achieved by investing in related and unrelated targets (Chatterjee, 1986). Financial synergies lead to a reduction of the cost of capital (Devos et al., 2008; Lewellen, 1971). With some M&As the risk of the firm's portfolio can be lowered, which leads to a lower cost of capital. M&As also lead to a larger firm size, which can also lead to a decreased cost of capital (Trautwein, 1990). These M&As will also lead to a reduction of default risk and therefore an increased debt capacity. Using this increased debt capacity can lead to an increased tax shield, i.e., a tax benefit. (Devos et al., 2008; Lewellen, 1971).

Collusive synergy is price related. Collusive synergy can be achieved by increased market power. A benefit of this form of synergy can be the ability to extract consumer surplus by using different prices for different consumers (Chatterjee, 1986). Merger and acquisition gains arise at the expense of customers and suppliers (Devos et al., 2008). According to Eckbo (1981) this means that mergers can lead to changes in relative product prices. Eckbo (1981) expects that changes in product prices induce fluctuations in the market value of those firms leading to changes in abnormal stock returns. Acquisitions can lead to price wars against competitors. This will lead to decreasing stock prices of competitors (Eckbo & Wier, 1985).

Empirical evidence domestic & cross-border M&As

Empirical evidence supports the view that synergy is an important motive for domestic M&As. Ingham et al. (1992) find in their survey study containing 146 of the UK's top 500 firms which carried out domestic acquisitions that the three most important M&A motives are increased profitability, pursuit of market power, and marketing economies of scale. All three motives are synergy motives. Brouthers et al. (1998) also find that synergy is the most important motive in their survey study which contains 17 out of 47 Dutch firms which were quoted and carried out a domestic acquisition in 1994. Furthermore, Bradley et al. (1988) conclude based on empirical results that acquisitions via tender offers are attempts by bidding firms to exploit potential synergies. Their study had a sample of domestic U.S. acquisitions during the period 1963-1980. Tender offers are M&A transactions in which the acquirer offers to buy the shares directly from the shareholders under specified conditions. Besides, Hayn (1989) finds in a study of 640 domestic M&As that tax considerations motivate M&As. Berkovitch and Narayanan (1993) find empirical results showing that synergy is the primary motive in takeovers with positive total gains. In addition, there is support for the synergy motive with cross-border M&As. Seth et al. (2000) examined the motives underlying 100 international acquisitions of U.S. firms during the period 1981-1990. They find that synergy is the predominant motive in their sample.

Empirical evidence Indian M&As

Tripathi and Lamba (2015) did a survey study on cross-border mergers and acquisitions by Indian firms for the period 1998 through 2009. They find that there are five motives of cross-border M&As, namely value creation, improvement in efficiency, market leadership, marketing and strategic motives and synergistic gains. This gives support for the synergy motive. In addition, Agarwal and Bhattacharjea (2006) find an increase in M&A activity in India after changes in antitrust legislation indicating market power or collusive synergy as an M&A motive.

Agency theory

Agency theory is a cornerstone of the corporate governance field, both in literature and practice (Daily, Dalton, & Cannella, 2003; Dalton, Daily, Ell strand, & Johnson, 1998; Shleifer & Vishny, 1997). According to the agency theory, different parties have different interests. Managers might behave in their own interest at the expense of the principal. In most of the agency explanations for acquisitions, acquisitions lead to the extraction of value from the firm

by managers of the acquiring firms. An acquisition that is not in the interest of the principals may result in agency costs that reduce the total value of the combined firm available to shareholders (Berkovitch & Narayanan, 1993). Agency problems arise "from the conflicting interests of agents and principals" (Hillier et al., 2011, p. 646).

Agency theory theorizes two possible problems in the principal-agency relationships. The first agency problem arises when the principal and agent have different desires and it is expensive or hard to verify what the agent is doing for the principal. The second agency problem is related to risk, the principal and agent have different views toward risk. Because of these different views the problem arises that the principal and the agent may prefer different decisions and actions. In classic agency theory, the principals are the shareholders and the agents are formed by the board of directors and management (Eisenhardt, 1989; Lan & Heracleous (2010), see figure 2. In this theory the main role of the board of directors is to monitor managers in order to control that their desires and actions do not differ substantially from those of the principals (Lan & Heracleous, 2010). However, there is some critique on this view, Lan and Heracleous (2010) argue that the principal is not formed by the shareholders but by the corporation. Furthermore, they argue that the board is not an agent but is charged with serving and balancing sometimes conflicting interests of the multiple groups.

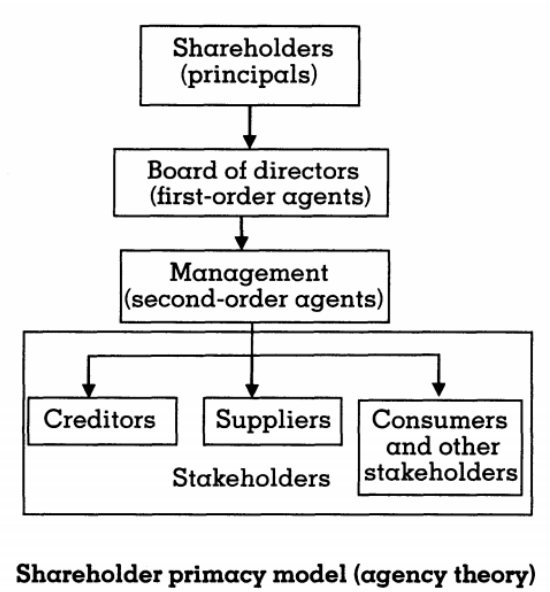

Figure 2. Shareholder primacy model. Adapted from Lan and Heracleous (2010, p. 302)

Still, agency theory is often used in the literature, e.g., in the field of M&As. For example, in the case of ineffective managers of a potential target an M&A can be value-enhancing if the goal of the M&A transaction is to discipline the target's management. This is called *market discipline*. Agency theory hypothesizes that shareholders can be protected from ineffective management with M&As. This market discipline theory assumes that firms with a low level of corporate governance have a low market value and are acquired by high valued acquiring firms (Haleblian et al., 2009; Jensen, 1986). Empirical evidence supports this view of market discipline by finding that CEOs of acquired firms are often dismissed after an acquisition has been completed (Agrawal & Walkling, 1994; Martin & McConnell, 1991; Morck & Vishny, 1988)

In addition, when having a substantial amount of cash flows, agency problems concerning pay out policies are more severe. According to the *free cash flow* theory high amounts of liquidity make it more likely that managers spend money, one way is by acquiring other firms without thorough analysis. "Free cash flow is cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital" (Jensen, 1986, p. 323). It is suggested that these free cash flows also lead to a higher possibility of acquiring value-decreasing acquisitions (Jensen, 1986; Martynova & Renneboog, 2008).

Furthermore, according to the *entrenchment* theory managers make decisions to minimize the risk of their replacement. Managers have an incentive to take actions that do not maximize the welfare of the principal. They make much use of investments in assets and in other organizations, that are complementary to their skills. This makes managers more valuable for the firm. Managers bind shareholders to themselves by using the money of shareholders to make certain investments specific to themselves. However, in many cases these investments reduce value (Shleifer & Vishny, 1989).

Empirical evidence domestic & cross-border M&As

Nguyen et al. (2012) find that firms that are more acquisitive are likely to be associated with higher levels of agency problems. They studied 3520 domestic acquisitions in the United States. However, they do not find support for the free cash flow theory as a motive for domestic M&As. Berkovitch and Narayanan (1993) find evidence that agency is the primary motive in domestic takeovers with negative total gains. Furthermore, Harford (1999) finds evidence supporting the

free cash flow theory in their study containing a sample of attempted domestic U.S. mergers and acquisitions from 1977 through 1993. Regarding cross-border M&As, Seth et al. (2000) find empirical evidence that is consistent with the managerialism/agency theory in a sample of 100 cross-border deals of U.S. firms. They find a significant negative relation between target gains and total gains within the negative total gains sub-sample, which is in line with the agency theory.

Hubris

According to the hubris theory acquisitions are motivated by managers' mistakes and there are no synergy gains (Berkovitch & Narayanan, 1993; Roll, 1986). The hubris theory says that the management has exaggerated self-confidence. In this way they overestimate their ability to extract acquisition benefits (Hayward & Hambrick, 1997). They misperceive M&A opportunities to be value-enhancing while they are in fact value-destroying. This leads to less value (Malmendier & Tate, 2008). In addition, hubris can lead to overpayment for the target firm. Hayward and Hambrick (1997) find with a sample of 106 large acquisitions that CEO hubris indeed leads to a higher price paid than the value of the shares prior to the takeover news. In the strictest form of the hubris theory, there should not be a positive total gain with M&A deals.

Because the acquirer's management overestimates their abilities to manage an acquisition, Rau and Vermaelen (1998) claim that managerial hubris effects firms with a low book-to-market ratio that acquire a firm with a high book-to-market ratio. The book-to-market ratio is the book value of the equity divided by the market capitalization. The market capitalization equals the number of shares multiplied with the share price.

Empirical evidence domestic & cross-border M&As

Empirical evidence of Moeller et al. (2004) shows that bigger firms, in which the chance of the existence of hubristic managers is more likely, offer higher M&A premiums and are more likely to complete an M&A than smaller firms. Their study contains a very large sample of 12,023 domestic acquisitions by public U.S. firms from 1980 to 2001. Also Berkovitch and Narayanan (1993) find evidence that suggests existence of the hubris motive in U.S. acquisitions, because of a correlation of zero between target and total gain for the whole sample. In addition, Goergen and Renneboog (2004) show that one third of the large European takeovers in the 1990s suffer

from managerial hubris, because for deals with negative total gains, they find a zero correlation between target gains and total gains. Regarding cross-border deals, Seth et al. (2000) find that hubris coexists with synergy in explaining the acquisitions in the sample of cross-border acquisitions of U.S. firms.

Concluding, the literature distinguishes several M&A motives, the main motives are strategic asset seeking, foreign market seeking, synergy, agency, and hubris. The most important motive for cross-border M&As from emerging market countries is strategic asset seeking (Harris & Ravenscraft, 1991). Still, one M&A can be motivated by several motives (Nguyen et al., 2012). Haleblian et al. (2009) argue that it might be for both value-increasing as value-decreasing reasons why M&A activity takes place so much. This means that the value-decreasing motives, agency and hubris, might coexist with the value-increasing motives. The before-mentioned empirical evidence indicates that the value-increasing motives are more pronounced, especially for cross-border M&As from emerging markets like India. For example, Berkovitch and Narayanan (1993) found that synergy is the primary motive for the subsample with positive total gains and agency is the motive for the subsample with negative total gains, but the subsample with positive total gains was much larger.

2.3 Factors influencing M&A decisions

In the literature several factors are coined that can influence M&A decisions. These factors can be internal or external factors (Froot and Stein, 1991; Haleblian et al., 2009; Harzing, 2002; Levitt & March, 1988; Matsusaka, 1996). Internal factors are those factors that happen within the organization and impact the firm's strengths and weaknesses, while external factors happen outside the firm and impact the opportunities and threats of the firm (Cole, 2004).

2.3.1 Internal factors

International strategy

The firm's international strategy can have a strong influence on M&A behavior. However, research in this area is limited (Halebian et al., 2009). Many studies distinguish two main types of international strategy, namely global and country-specific strategies. Global strategies are used when there is a lot of global competition with interrelated national markets. Global strategies are focused on efficiency. On the other hand, country-specific strategies are used when firms compete mostly on a domestic level. With this country-specific strategy

decentralized, autonomous subsidiaries response to local customer needs by offering products and services adapted to the specific markets (Harzing, 2002).

The theoretical perspective of firm-specific advantages can explain the association between the firm's international strategy and foreign investment decisions. Each international strategy is associated with certain firm-specific advantages. In this context two types of firm-specific advantages are distinguished, namely non-location-bound advantages and location-bound advantages. Non-location-bound advantages can be exploited on an international level. They are easily transferable at low cost and can lead to economies of scope and scale. In contrast, location-bound advantages cannot be exploited in other countries without expensive adaptations. Global firms tend to focus on non-location-bound advantages, whereas firms with the country-specific strategy tend to focus on location-bound advantages to serve the local needs. For global firms it is easier to exploit non-location bound advantages by building up efficient production facilities from scratch rather than acquiring existing firms. Therefore, global strategy firms tend to engage in greenfield FDIs rather than M&As. Greenfield FDIs are foreign direct investments in which a firm builds a new subsidiary in a foreign country. However, country-specific strategy firms seek to offer country-specific value. They need to consider local environmental characteristics. This can be done more easily by acquiring a local firm, i.e., engaging in an M&A (Harzing, 2002; Rugman & Verbeke, 1992). Empirical evidence of Harzing (2002) shows that firms having a global strategy engage in greenfield FDIs more often. In contrast, firms following a country-specific strategy are more inclined to engage in M&As.

M&A experience

M&A experience affecting M&A behavior has been a point of interest in management literature (Haleblian et al, 2009). Chittoor et al. (2015) argue that the experience of decision makers with previous M&As, especially experience with other markets, influences the subjective judgement of risk with M&As. Acquisition experience is expected to lead to a higher likelihood of acquiring other foreign firms (Chittoor et al., 2015). Furthermore, in behavioral learning theory the organizational routine that arises from experience is a key concept (Haleblian et al., 2006; Levitt & March, 1988). This theory suggests that a higher level of experience with M&A decisions is associated with a larger chance to engage in another M&A (Haleblian et al., 2006).

Empirical evidence shows that acquisition experience is positively related to subsequent acquisition likelihood (Chittor et al, 2015; Haleblian et al., 2006). Chittoor et al (2015) based their empirical study on Indian firms over a 10-year period to find that previous cross-border M&A experience of the CEO has a significant effect on the probability of a firm engaging in later cross-border M&As. Haleblian et al. (2006) studied a sample of banking industry acquisitions from 1988 through 2001 and show the same results. In addition, Baumet al. (2000) found that firms have repetitive behavior, i.e., they acquire other firms that are geographically and organizationally similar to previous acquired firms. Furthermore, others find that acquisition experience of a particular type, e.g., experience in vertical acquisitions can increase the likelihood of subsequent acquisitions of the same type (Amburgey & Miner, 1992) and decrease the likelihood of acquisitions of other types (Yang & Hyland, 2006).

Previous M&A performance

The existence of prior M&A experience is insufficient in explaining subsequent M&A behavior, the prior M&A performance should also have an impact on future M&A behaviors for firms with M&A experience (Haleblian et al., 2006; Levitt & March, 1988). The behavioral theory explains the effect of prior M&A performance on future acquisition behavior. According to the behavioral theory firms adapt their behavior over time based on previous outcomes. When a firm shows poor M&A performance current strategies will be reevaluated in order to improve performance. When a firm shows good M&A performance the M&A decision is more likely to be repeated, because the learned M&A skills and capabilities are present and the M&A decision is viewed as less risky and beneficial (Haleblian et al., 2006; Levitt & March, 1988).

Haleblian et al. (2006) empirically find that past M&A performance is positively related to the likelihood of subsequent M&As. Also Kumar et al. (2015) find that previous M&A announcement returns of the acquirer has a V shaped relationship on buying volatile targets. In a broader sense, empirical studies have shown that firms do react strategically to past performance feedback. Firms are more likely to respond with strategic change when firm performance is poor (Boeker, 1989; Denis & Denis, 1995; Hamilton & Chow, 1993). In contrast, strong performance leads to organizational persistence regarding strategic decisions (Audia et al., 2000; Miller & Chen, 1994).

2.3.3 External factors

Foreign exchange rates

Froot and Stein (1991) link foreign exchange rates to cross-border M&A decisions. When acquiring a foreign firm, the exchange rate influences the acquisition costs for the acquiring firm. Froot and Stein (1991) argue that depending on the development of the foreign exchange rate an acquiring firm can get an advantage or a disadvantage. When the home country's currency appreciates against the target country's currency the acquiring firm has an advantage. This will make a cross-border M&A more likely. In contrast, if the home country's currency depreciates against the target country's currency the acquiring firm has a disadvantage. This will decrease the chance of a cross-border M&A (Froot & Stein, 1991; Harris & Ravenscraft, 1991).

Empirical evidence supporting the influence of exchange rates on M&A behavior is limited. Froot and Stein (1991) find that the number and value of cross-border M&As into the U.S. are significantly related to the foreign exchange rates. However, Martin (1990) finds that foreign exchange rates in general do not play a significant role in FDI decisions, only for German firms there was a significant relation between FDI into the U.S. and exchange rates. They also studied French, Swiss, Dutch, U.K., Canadian, and Japanese firms investing in the U.S. In addition, Dewenter (1995) finds no significant relationship between exchange rates and foreign investment relative to domestic investment when controlling for relative corporate wealth and the overall level of investment.

Legal factors

Legal changes can also affect M&A behavior of firms. For example, antitrust law can change M&A behavior. Matsusaka (1996) argues that the antitrust law introduced in the 1960s in the U.S. made firms careful in acquiring large firms in the same industry. Instead they chose to acquire firms in unrelated industries or small related firms. When antitrust law became less stringent in the 1980s, firms were able to grow in their core business again.

There is limited empirical evidence to support the impact of legal factors on M&A behavior. Empirical evidence by Stigler (1966) supports the antitrust hypothesis, because the law had a strong negative effect on large horizontal mergers. Furthermore, Agarwal and Bhattacharjea (2006) find that in India M&A activity increased after changes in antitrust legislation. However,

Matsusaka (1996) found that diversification was not used more often with large M&As than with small M&As, which does not support the antitrust hypothesis. In addition, Matsusaka (1996) found that in several European counties, in which such restrictions on horizontal growth were not present, there were similar diversification waves.

Above a number of factors affecting M&A decisions are disused. However, there are other factors that can influence M&A behavior like CEO age (Yim, 2013), geographical distance (Buckley et al., 2014), environmental uncertainty (Haleblian et al., 2009), family ownership (Miller et al., 2010), and social, economic and political linkages between countries (Buckley et al., 2014)

2.4 Impact of M&As on performance

Academic literature has approached the impact of mergers and acquisitions on performance in several ways. A lot of research has been done on M&A performance in finance, strategic management, and organizational behavior literature for decades. Despite the large amount of studies covering this topic, the studies across and within the disciplines use multiple dimensions for acquisition performance. These dimensions of acquisition performance include subjective and objective measurements and short-term and long-term time horizon (Zollo & Meier, 2008).

While a lot of different measures are used for M&A performance in literature, in this section the most used measures, as found by Zollo and Meier (2008) while reviewing 88 M&A articles published in top management and finance journals between 1970 and 2006, will be discussed more thoroughly. The first two measures, short- and long-term stock performance, are related to stock performance, the third measure is accounting performance, and the fourth measure is subjective overall acquisition performance. In addition, the empirical evidence that covers the impact of M&As on the different measures of M&A performance is discussed. Furthermore, per M&A performance measure the effects of the different motive types on M&A performance are discussed.

2.4.1 Short-term stock performance

In M&A studies stock performance is often used as a measure for M&A performance, but a distinction should be made between short-term stock performance and long-term stock performance (Zollo & Meier, 2008). In this section both types of stock performance are

discussed. Zollo and Meier (2008) found in their literature review that 35 out of the 88 analyzed M&A studies used short-term stock performance, it is the most used measure for M&A performance. Short-term acquisition performance is commonly operationalized with cumulative abnormal returns of the acquirer's stocks over short time windows around the announcement of the M&A deal to capture M&A performance (Finkelstein & Haleblian, 2002; McWilliams & Siegel, 1997). Therefore, it is also called announcement return. Abnormal return is the actual return deducted by the expected return for one day. Cumulative abnormal return equals the abnormal returns of a few days around the M&A announcement. In many studies the abnormal returns of two days before until two days after the M&A announcement are used to calculate the cumulative abnormal return for one M&A announcement (Aybar & Ficici, 2009; Gubbi et al., 2010; Nicholson & Salaber, 2013; Ning et al, 2014; Tao et al., 2017; Zollo & Meier, 2008).

2.4.1.1 Empirical evidence short-term stock performance

Short-term stock performance domestic M&As

Empirical evidence regarding domestic M&A announcements shows a positive short-term stock market reaction because of expected synergy in multiple cases (Andriosopoulos et al., 2016; Black et al., 2015; Mateev, 2017; Ushijima, 2010). Andriosopoulos et al. (2016) find that domestic M&A announcements lead to significantly positive stock market reactions by studying 1519 deals from 2000 until 2011 in the United Kingdom. These reactions were moderated by low market-to-book values of the acquirers, because there the hubris motive is less present. Furthermore, Black et al. (2015) find positive announcement returns for 415 domestic Chinese M&A deals announced from 2000 until 2010. It is worth mentioning that more than 57.1% of the deals is financed with cash. In addition, 21.4% is financed with a mix of cash and stock. This could have had a positive effect on the abnormal returns. Besides, Ushijima (2010) finds that the abnormal returns around total and partial merger announcements are positive when studying 38 total and 106 partial Japanese mergers. Japanese investors assess mergers as synergy creating investments. Mateev (2017) used a sample of 2823 European acquisitions announced between 2002 and 2010.

Contrary, Nicholson and Salaber (2015) find no significant stock market reactions to domestic M&A announcements, which were announced between 2004 until 2013. It should be noted that their sample only contains banks, which is a specific sector. The 735 banking deals were

initiated by banks in several emerging and developed markets. Gregory and O'Donohoe (2014) even find negative stock market reactions for domestic M&A announcements in their study, which contains 169 deals in the UK announced from 1990 until 2006. They explain these negative reactions with the free cash flow theory. Furthermore, Ishii and Xuan (2014) find negative abnormal returns for domestic U.S. M&As. It is worth mentioning that the industry of the acquirers that is represented most frequently in their sample is finance.

Short-term stock performance cross-border M&As

Multiple previous studies regarding the effect of cross-border M&A announcements on short-term stock market reactions show a positive effect (Chari et al., 2009; Mateev, 2017; Ning et al., 2014; Tao et al., 2017), while some find an insignificant (Black et al., 2015) or negative effect (Aybar and Ficici, 2009; Chen & Young, 2010; Gregory & O'Donohoe, 2014)). Chari et al. (2009) found positive abnormal returns for developed market firms acquiring emerging market firms, not when the developed market firms acquire firms from other developed markets. Complementary differences between developed and emerging market firms can explain this. Complementarity is the basis for valuable transfer of assets between acquirers and targets (Kim & Finkelstein, 2009). Chari et al. (2009) also found that the abnormal returns are moderated by industries with a high level of intangible assets. Mateev (2017), who found a positive effect of M&A announcements on short-term stockholder value, used a sample of 2823 M&A deals initiated by firms from different European countries in the period 2002-2010. In addition, their findings show the effect to be significantly more positive for cross-border M&As than for domestic ones. This indicates the presence of market imperfections which lead to advantages when acquiring foreign firms. Empirical evidence of Tao et al. (2017) shows positive announcement returns with cross-border M&As by Chinese firms while using a sample of 165 deals announced in the period 2000-2012. They argue that cross-border M&As are value-increasing, because they are interpreted as a strong signal released by the acquirer's top management indicating ambitiousness and strong confidence in the global market. Ning et al. (2014) studied 335 cross-border deals announced between 1991 and 2010 by Chinese bidders. They also show significant positive announcement returns, because investors recognize the advantages explained by the internalization and resource-based theory.

Black et al. (2015) find insignificant announcement returns for the subsample cross-border M&As, indicating that the value-decreasing motives are considerably present in their sample.

Aybar and Ficici (2009) found the short-term stock market reactions to M&A announcements to be negative using a sample of 433 deals by 58 emerging-market firms. Agency and hubris theory can explain this negative sign. In addition, they found that a high-tech nature of the bidder and relatedness of the targets have a negative impact on short-term M&A performance. Furthermore, Chen and Young (2010) studied 39 deals by Chinese firms and find negative announcement returns as a consequence of cross-border M&As. They find that government ownership has a negative effect on stock market reactions to Chinese cross-border M&A announcements. They argue that this is caused by a lack of managerial competence of the acquirers and by political motives to engage into these M&As. This could be caused by managers acquiring foreign firms to flee out of the complex structure of the multinational firm to avoid agency monitoring. Gregory and O'Donohoe (2014) also found negative abnormal returns for their subsample of 119 cross-border deals announced by U.K. acquirers. This could be caused by a large amount of U.S. targets. The competition for public U.S. targets is very high.

Short-term stock performance Indian M&As

Gubbi et al. (2010) find positive stock market reactions with cross-border M&A announcements in their study that contains 425 announcements by Indian firms. These market reactions are explained by the internalization theory. In addition, Nicholson and Salaber (2013) studied 63 cross-border deals by Chinese firms and 203 deals by Indian firms to find positive abnormal returns caused by the strategic asset seeking motive. However, Kohli and Mann (2012) find no significant announcement returns in their study containing 66 domestic deals in India. In contrast, their subsample cross-border M&As does show that announcements lead to positive abnormal returns. The subsample cross-border acquisitions contained 202 deals. The higher abnormal returns with cross-border deals are explained by the internalization theory, cross-border deals are characterized by opportunities to benefit from market imperfections.

2.4.1.2 Empirical evidence impact of motives on short-term stock performance

Impact strategic asset seeking on short-term stock performance

(Indian) Cross-border M&As

Conn et al. (2005) find support for strategic asset seeking while studying 4,000 M&As by U.K. bidding firms. They found that cross-border M&As involving high-tech firms retain higher announcement returns. Besides, Eun et al. (1996) support reverse internalization or strategic

asset seeking by studying M&As by firms from several developed countries. They find that cross-border M&As lead to higher announcement returns when being able to redeploy the target's intangible assets well. In addition, Seth et al. (2002) find in their study with a sample of 100 U.S. firms acquiring foreign firms that acquiring these firms to get resources and skills leads to gains in the value of bidder firms. These findings support the theory that the asset seeking motive leads to positive value effects for the acquiring firms. Moreover, Uhlenbruck et al. (2006) find that cross-border M&As lead to higher abnormal returns when targeting internet firms, which can facilitate the transfer of scarce resources. This supports the view that strategic asset seeking or reverse internalization leads to higher M&A announcement returns. Furthermore, Nicholson and Salaber (2013) find that Chinese and Indian bidders get higher abnormal returns, if the target firm is in a developed economy, which supports the asset seeking motive. In addition, Gubbi et al. (2010) find that the level of economic and institutional advancement of the host country is positively correlated with investors' reactions of Indian firms, these findings support the positive impact of the asset seeking motive or reverse internalization theory.

Impact foreign market seeking on short-term stock performance

Morck and Yeung (1992) studied 322 cross-border M&As by U.S. firms between 1978 and 1988 and support forward internalization or foreign market seeking as a source of value creation. They found a significant positive relationship between the possession of intangible assets by the bidder and announcement returns with M&As. Similarly, Marr et al. (1993) find support for forward internalization. Foreign M&As lead to more value because of synergies from using intangible assets to improve the target. They analyzed 96 M&As of U.S. target firms by foreign firms in the period 1975-1987 for their study. However, Markides and Ittner (1994) only find partial support for foreign market seeking as a source of value creation in cross border M&As. They find that acquirer announcements returns are significantly related to brand- and reputation-related intangible assets supporting foreign market seeking, whereas announcement returns are not related to R&D intensity. The latter does not support forward internalization.

Impact synergy motive on short-term stock performance

Domestic & cross-border M&As

Berkovitch and Narayanan (1993) empirically find that synergy is the primary motive in takeovers with positive total gains while studying M&As in the period 1963-1984. In addition,

Ghosh and Jain (2000) find support for financial synergy. They find that financial leverage of combined firms increases significantly with M&As and that financial leverage is positively related to announcement returns. They studied 239 M&As in the period 1978-1987. Moreover, in an empirical study of 640 acquisitions during 1970–1985 Hayn (1989) finds that tax attributes of target firms explain bidder announcement returns. This finding supports the view of financial synergy. Furthermore, empirical results of Chatterjee (1986) show that collusive synergy is associated with the highest shareholder value while studying M&As from 1969 to 1972. Eckbo (1985) predicted that horizontal M&As are more likely to benefit from collusive synergy. However, the empirical results do not find enhanced abnormal returns for horizontal M&As, i.e., they do not find support for collusive synergy. Still, a direct link between horizontal M&As and the collusive synergy motive is questionable. Regarding cross-border M&A studies, Limmack and McGregor (1995) find in their study of 274 deals y U.K. firms in the period 1977-1986 that concentration ratio was not related to short-term stock performance. This also suggests no support for the operational and collusive synergy motive.

Impact agency problem on short-term stock performance

According to the free cash flow theory, which is one of the agency problems, bidders with a lot of cash, also known as free cash flow, can engage in negative net present value M&As. This can lead to lower announcement returns (Jensen, 1986; Martynova & Renneboog, 2008). Empirical evidence of Harford (1999) supports the free cash flow theory, because it shows a negative relationship between cash of the bidder and announcement returns. Kaplan and Weisbach (1992) find similar results. Furthermore, according to Jensen (1986) the agency cost of free cash flow is consistent with a wide range of data.

Fama and Jensen (1983) theorize that outside directors generally mitigate agency problems. Therefore, several studies looked at the relationship between the presence of outside directors and M&A performance. Walters et al. (2007) find that higher proportions of independent outside directors are indeed associated with better short-term M&A stock performance. Furthermore, Byrd and Hickman (1992) find that the relation between outside directors and short-term stock performance is positive, but nonlinear. An optimal board structure is composed of both inside and outside directors. Brickley, Coles, and Terry (1994) find similar results. These results indicate that agency problems have a negative effect on announcement returns, because mitigating agency problems leads to higher abnormal returns according to these two

studies. In contrast, Brown & Maloney (1999) do not find that the number of outside directors has an impact on the stock market reactions.

Impact hubris on short-term stock performance

Hayward & Hambrick (1997) found a negative relationship between the hubris motive and short-term shareholder returns. They studied pairs of publicly traded firms involved in large M&A deals between 1989 and 1992. In addition, Baradwaj et al. (1992) conclude based on their results that the hubris motive with M&As in the banking sector decreases short-term stock performance. They studied both domestic and cross-border M&As to come to this conclusion.

2.4.2 Long-term stock performance

According to the meta-analysis of Zollo and Meier (2008) long-term stock performance is another measure for M&A performance that is used quite often, it is used in 19% of the analyzed studies. This measure of M&A performance is mostly computed with the market model, which is very often used for short-term stock performance, or with a benchmark portfolio technique. With this portfolio technique the acquirer's cumulative monthly return of up to 48 months is compared to the returns of a group of companies in the same period. For example, the firm's size, same industry, book-to-market ratio and geographic region are considered (Dutta & Jog, 2009; Martynova & Renneboog, 2008; Zollo & Meier, 2008).

2.4.2.1 Empirical evidence long-term stock performance

Long-term stock performance (Indian) domestic M&As

Most of the M&A studies that focused on the long-term stock performance of domestic M&As found significant negative abnormal returns or insignificant abnormal returns. Bradley and Sundaram (2004) studied U.S. M&As closed between 1990 and 2000 and found that these M&As lead to negative abnormal returns in the long run. Also Andre et al. (2004) find negative abnormal returns in their study of Canadian M&As between 1980 and 2000. In addition, Croci (2007) studied the one-year, two-year, and three-year post-acquisition abnormal returns of 1990-2001 M&As by firms from France, Germany, Italy, Switzerland, and the U.K. All the three event windows showed negative abnormal returns, but only the two-year post-acquisition abnormal return was significant. Furthermore, Ang and Cheng (2006) found significant negative returns for stock financed U.S. M&A deals, but insignificant negative returns for cash financed M&A deals. They studied M&A deals closed between 1984 and 2001.

However, Moeller et al. (2004) found insignificant abnormal returns in their study of domestic U.S. M&As between 1980 and 2001. In addition, Dutta and Jog (2004) find no significant negative long-term abnormal returns once they account for methodological discrepancies. They studied Canadian M&As of the period 1992-2002. Furthermore, Chakrabarti (2007) finds that Indian M&As lead to insignificant three-year post-acquisition performance within their domestic subsample after adjusting for the performance of the industry.

Long-term stock performance (Indian) cross-border M&As

Most M&A studies that looked at the long-term stock performance of cross-border M&As found significant negative abnormal returns or insignificant abnormal returns. Aw and Chatterjee (2004) find that U.K. firms experience negative cumulative abnormal returns in the two years after the acquisition when acquiring large foreign listed targets, the sample contained deals closed in the period 1991-1996. In addition, Black et al. (2007) find negative long run abnormal returns while studying 361 M&As by U.S. firms targeting public foreign firms. Furthermore, Conn et al. (2005) studied a large sample of 1140 cross-border public and private M&A deals by firms from the U.K in the '80s and '90s. They found that cross-border public M&As (listed target firms) result in negative long-term abnormal returns. In contrast, cross-border private M&As (unlisted target firms) result in zero long-term abnormal returns.

However, Eckbo and Thorburn (2000) find insignificant long run abnormal returns after M&As by U.S. firms acquiring both public and private Canadian target firms, the sample size was 394. Also Gregory and McCorriston (2015) do not find abnormal returns significantly different from zero in their sample of cross-border M&As by U.K. firms in the period 1985–1994. Furthermore, Chakrabarti (2007) finds that Indian M&As lead to insignificant positive three-year post-acquisition performance within their cross-border subsample after adjusting for the performance of industry indices. In contrast, Lan et al. (2015) find that Chinese bidders gain shareholder value in the long run as a consequence of cross-border M&A deals. They studied 140 deals closed between 1997 and 2010. They did not mention whether the target firms were listed or unlisted.

2.4.2.2 Empirical evidence impact of motives on long-term stock performance

Impact strategic asset seeking on long-term stock performance

Conn et al. (2005) find support for reverse internalization while studying 4,000 M&As by U.K. bidding firms. They found that M&As that involve high-tech target firms retain higher long-term stock returns, which supports strategic asset seeking. In addition, Gregory and McCorriston (2002) find that cross-border M&As of U.S. targets lead to a higher long-term stock performance when the acquirers are in R&D intensive industries, which also supports strategic asset seeking.

Impact foreign market seeking on long-term stock performance

Conn et al. (2005) find support for forward internalization theory in addition to reverse internalization while studying 4,000 M&As by U.K. bidding firms. They found that domestic and cross-border M&As involving high-tech acquiring firms retain higher long-term stock returns, which supports forward internalization or foreign market seeking.

Impact synergy motive on long-term stock performance

According to Loughran and Vijh (1997), the mode of acquisition (merger or tender offer) may be related to the expected performance from operational synergies. Tender offers are made directly to target shareholders. They indicate larger confidence in the ability to realize operational synergies with the M&A deal. This study shows higher abnormal returns for tender offers, which indicates that the synergy motive is value increasing in the long run. They studied 947 M&As during 1970-1989. Moreover, Agrawal et al. (2000) studied domestic U.S. M&As and came to similar findings. In addition, Kusewitt (1985) concluded that acquisitions should be made in related businesses, because M&As in related businesses, in which synergies are more likely to be created, lead to a more positive long-term stock market reaction on average.

Impact agency problem on long-term stock performance

Malatesta (1983) finds in a study of 121 large M&A deals that M&As that are probably motivated by agency problems have lower abnormal returns in the long run. This result is in line with the prediction of the agency theory. In addition, Morck et al. (1990) find that the agency problem reduces long-term shareholder wealth. They measured long-term stock performance by comparing the firm's three-year equity growth compared to the industry's

equity growth. This also supports the agency theory. However, Gregory (2005) finds no support for the free cash flow theory. Instead, using a sample of U.K. M&As enhanced performance was found for acquirers with high free cash flow.

Impact hubris on long-term stock performance

Hayward et al. (1997) found a negative relationship between hubris and long-term shareholder returns. This supports the expectations of the hubris theory. In addition, Rau and Vermaelen (1998) argue that acquirers with a high market value due to their recent past performance may act out of overconfidence in acquiring another firm. According to the hubris theory these overconfident acquirers should underperform other acquirers. Indeed, they found negative abnormal returns for overconfident acquirers and these abnormal returns were lower than for the other acquirers. Also Andre et al. (2004) find that overvalued acquirers experience lower abnormal returns.

2.4.3 Accounting performance

Accounting performance, which is also referred to as operating performance, is the second most used measure for M&A performance after short-term stock performance (Zollo & Meier, 2008). In the literature review of Zollo and Meier (2008) it is used in 25 (28%) of the sampled studies. Accounting performance is typically assessed by looking at earnings, cash flow, or profitability ratios, like return on equity (ROE) and return on investment (ROI). The acquiring firm's accounting performance versus the accounting performance before the M&A is compared to a benchmark, this benchmark could be based on size, industry, and geographic location. Accounting performance is considered a long-term measure for M&A performance as it usually assesses the performance during multiple years (Martynova & Renneboog, 2008; Zollo & Meier, 2008).

2.4.3.1 Empirical evidence accounting performance

Powell and Stark (2005) studied cash flow developments after U.K. M&As. They found that M&As lead to enhanced cash flows. They used industry, size, and market-to-book value to benchmark M&A performance. Furthermore, Kumar and Bansal (2008) find a positive impact of Indian M&A deals on accounting performance. In addition, Linn and Switzer (2001) studied 413 M&A by U.S. firms and looked at pretax cash flows. Also Dutta and Jog (2009) find significant positive operational performance after M&As, in this case Canadian M&As. They

found that when considering the whole sample M&As lead to significant better cash flows than the average in the industry. However, when looking more closely to the data it becomes clear that this finding is only significant for cash financed M&As and not for the stock and cash/stock financed ones. Besides, Carline et al. (2002) analyzed U.K. firms merging between 1985 and 1994. They found a positive effect of M&As on long-term accounting performance. They used other firms in the industry as a benchmark. However, these finding are significantly related to the M&A payment type (stock, cash, or cash/stock financed).

However, Ghosh (2001) finds in a study of 315 large M&As by U.S. firms that M&As do not lead to increasing or decreasing operating cash flow performance. Moreover, Gugler et al. (2003) studied a total of 1250 M&As by firms from several countries in the world. They found that M&As in general increase profits significantly, whereas the sales of the bidders decreased. Furthermore, Kumar (2009) finds that the profitability, sales to average total assets ratio (asset turnover), and solvency of the bidders are not improved by the Indian M&A deals compared to pre-merger values. Also Chari et al. (2009) do not find significant different ROAs after cross-border M&As. They argue that this is partly caused by the small sample size of 33 deals targeting emerging market firms. In addition, a general limitation of this measure it that it is relatively difficult to observe patterns in two years of ROA data.

2.4.3.3 Empirical evidence impact motives on accounting performance

Impact synergy motive on accounting performance

Devos et al. (2008) studied 264 large M&As closed in the period 1980-2004. They compared the acquirer's performance with the forecasts from before the M&A deal. They looked at sales, operating margin, working capital, depreciation, capital expenditure, and long-term debt. They searched for different types of synergy gains, namely operational, financial, and collusive synergies. They found that operational synergies are responsible for the largest part of the experienced synergies, namely 8.38% out of the 10.03%. Tax benefits contribute to merely 1.64% of additional value, while market power does not lead to significant extra value. Furthermore, Ramakrishnan (2008) looked at pre-tax operating cash flow returns scaled by the operating assets of the sample firms to measure M&A performance. The findings indicate that Indian M&As benefit from the synergy motive. However, Kitching (1967) concluded that it was financial synergy, not operational synergy, that could be achieved through mergers.

However, these financial synergies were not translated into better operating performance, in their case ROA. The synergies were only found at tax, labor, and overheads level.

Impact agency problem on accounting performance

Morck et al. (1990) found that the agency problem reduces the firm's accounting performance with U.S. M&As. They measured accounting performance by comparing the firm's three-year income growth to the industry's income growth. In addition, Sharma and Ho (2002) find results that support the agency theory since the M&As resulted in lower accounting performance but increased firm size. They studied Australian M&As to come to these findings.

2.4.4 Subjective overall M&A performance

Overall acquisition performance is a subjective measure for M&A performance. This measure assesses M&A performance by interviewing the firm's management or external experts for their subjective assessment. The realization of the M&A objectives is considered. At the time of the deal and after the integration process the level of value creation is assessed by looking at several items, e.g., qualitative assessments of degrees of synergy realization (Schoenberg, 2006; Zollo & Meier, 2008). Subjective overall acquisition performance is used in 14% of the articles analyzed by Zollo and Meier (2008). Multiple organizational behavior and strategic management studies have used subjective acquisition performance to measure M&A performance. Difficulties in obtaining objective data can be a reason to use subjective acquisition performance (Schoenberg, 2006).

2.4.3.1 Empirical evidence overall subjective M&A performance

Since subjective performance is not used very often as a measure for M&A performance, the empirical evidence below is limited. Canella and Hambrick (1993) are one of the authors that used this measure, they selected executives of the acquiring firm and experts specialized in the acquiring firms' securities. The selected executives and experts were asked about the performance at the time of the deal and four years later. The authors found that the subjective performance increased after the M&A deal for their sample of 96 M&As. In addition, Bruton et al. (1994) studied 51 acquisitions of distressed firms and 46 of non-distressed firms. For both groups subjective M&A performance was positive. They used a panel of academic evaluators who had to evaluate the success of each M&A deal on a seven-point scale. Furthermore, Hayward (2002) consulted security analysts to assess the M&A performances of U.S. firms in

the industry they follow, in total six industries are analyzed. Hayward (2002) found that on average analyst rating was 4.7, which is significantly different from the midpoint of the response scale of 4. This indicates that on average the analysists assess that M&As lead to value creation. On top of that, Ingham, Kran and Lovestam (1992) surveyed chief executive officers (CEOs) in 146 large firms in the United Kingdom. 77 percent of the CEOs believed that short-term profitability increased, while 68 percent believed that profitability increased in the long run.

2.4.4.2 Empirical evidence impact motives on subjective M&A performance

Impact strategic asset seeking on subjective M&A performance

Capron (1999) studied 253 horizontal M&As that were initiated by European and U.S. firms in manufacturing industries. Capron (1999) found that post-acquisition resource redeployment to acquirers improves subjective M&A performance significantly, which gives support for the positive impact of strategic asset seeking.

Impact foreign market seeking on subjective M&A performance

Capron (1999) also found that post-acquisition resource redeployment to targets improves M&A performance significantly measured by self-reported changes in market shares, sales, intrinsic profitability, and relative profitability compared to industry average. This gives support for the expectations of the theory regarding foreign market seeking.

Impact synergy motive on subjective M&A performance

Capron (1999) shows that asset divestiture, which is the elimination of redundant activities and inefficient management practices, can contribute to the performance with European and U.S. M&As. This study contained mostly cross-border M&As and supports the synergy theory. However, when the divested assets are the target's assets then performance could be damaged. The study used self-reported measures of changes in market shares, sales, intrinsic profitability, and relative profitability compared to industry average.

2.5 Factors influencing M&A performance

Several factors, in addition to the M&A motives, can influence M&A performance. Deal characteristics, firm characteristics, and external factors can influence M&A performance. (Barkema & Schijven, 2008; Carow et al., 2004; Datta et al., 1992; Fuller et al., 2002; Haleblian et al., 2009; Hofstede, 1980; Hubbard & Palia, 1995; Jarrell & Bradley, 1980; Kitching, 1967; Lang et al., 1989; Larsson & Finkelstein, 1999; Lubatkin, 1983; O'Reilly et al., 1991). Deal characteristics are those factors that are determined by the acquirer and/or target and are related to the transaction itself. Firm characteristics are the factors that happen within the organization and have an impact on the firm's strengths and weaknesses. External factors happen outside the firm and impact the opportunities and threats of the firm (Cole, 2004).

2.5.1 Deal characteristics

Bidder's approach

The bidder's approach, sometimes also referred to as the deal type, can influence M&A performance (Datta et al., 1992; Haleblian et al., 2009). The bidder's approach can be that of a merger or a tender offer. Mergers are negotiated with the target firm's management and/or the board of directors. The management and board of directors should approve the merger before the shareholders can vote. In contrast, with tender offers, the offer is made directly to the target's shareholders. The shareholders can decide whether to tender their shares to the bidding firm (Datta et al., 1992). According to Datta et al. (1992), the bidder's approach can have an influence on M&A performance. A tender offer announcement can lead to other firms wanting to place an offer to the same target firm. In this way a competitive process will be established, which should eventually result in higher bid premiums paid by the bidding firm. This will lead to benefits for the target at expense of the bidding firm. Thus, tender offers can lead, via increased competition and higher bid premiums, to less shareholder value for the bidding firms. However, Rau and Vermaelen (1998) found that tender offers outperform mergers, this was primarily caused by the fact that the involved bidders had relatively low book-to-market ratios. The managers of those low book-to-market firms might make poorer acquisition decisions than managers of other firms, which suggests that the underlying explanatory variable is the acquirer's expertise.

Payment type

Payment type, also called mode of payment, is another deal characteristic that can influence M&A performance. The payment type can be cash financing, stock financing, or a combination of cash and stock financing (Datta et al., 1992; Haleblian et al., 2009). The choice between the payment types depends on the agreements made in the negotiations, but can have an influence on M&A performance. According to King et al. (2004), M&As are financed with cash, if the management considers the firm as undervalued on the stock market and financed with stocks, if they consider the firm as overvalued on the stock market. Because of this, the stock market should see stock financed deals as signals of bidder overvaluation (Haleblian et al., 2009; Loughran & Vijh, 1997). This means that stock financed deals can lead to a decrease in valuation by the receiver, the stock market, as a consequence.

Several studies have tested the relationship between payment type and acquisition performance. Multiple studies show a positive relationship between cash financed deals and bidding firm's short-term stock performance (Ang & Cheng, 2006; Carow et al., 2004; Eckbo & Thorburn, 2000; Huang & Walkling, 1987; Travlos, 1987), long-term stock performance (Dutta & Jog, 2009; Loughran & Vijh, 1997), or accounting performance (Carline et al., 2002).

However, the effect of payment type on bidder accounting performance is found to be absent by Healy et al. (1992). They use pre-tax operating cash flows to measure improvements in performance. They define operating cash flows as sales, minus cost of goods sold, and selling and administrative expenses, plus depreciation and goodwill expenses. Furthermore, Heron and Lie (2002) found no material differences between cash and stock deals for their measure of performance (operating income scaled by sales). Operating income is revenue, minus cost of goods sold, minus operating expenses.

2.5.2 Firm characteristics

Firm size

Firm size has been argued by several authors to influence the performance of acquisitions (Haleblian et al., 2009; Kitching, 1967; Kusewitt, 1985). Kitching (1967) has discussed M&As with several executives who are experienced acquirers. The executives allocate M&A failures partly to the small size of the target firm in comparison to the acquiring firm. When the acquiring firm is much larger several problems are encountered. The acquirer's management cannot get interested and the target's entrepreneurs could not think like big businessmen. In

addition, hugely different firm size between acquirer and target firm can reflect misunderstandings (Calipha et al., 2010)

In support, Healy et al. (1992) have found that acquiring relatively large targets leads to positive M&A accounting performance, because of increased asset productivity. Also Carow et al. (2004) found a positive relationship between relative size and accounting performance, in this case short-term abnormal returns. Furthermore, Kitching (1967), found high failure rates with M&As in which the target's sales were less than 2 percent of the acquiring firm. However, Kusewitt (1989) found a negative relationship between relative size (ratio of the acquired firm to the acquiring firm) and acquisition performance (measured with long-term stock performance and accounting performance). Moeller et al. (2004) found that small targets acquired by small acquirers resulted in positive announcement returns, but large targets acquired by large acquirers resulted in negative abnormal returns. This is not in line with the relative size thinking. In addition, Li et al. (2016) find a negative impact of acquirer size on M&A performance for the subsample 2009-11, while for the subsample 2000-2008 this impact is found to be insignificant.

Ownership structure

Following the agency theory, the ownership structure can influence interest alignment and therefore also acquisition performance. Bhaumik and Selarka (2012) argue that ownership concentration in the hands of insiders will mitigate the agency conflict between managers and owners, and therefore have a positive impact on M&A performance. There are two reasons for this. First, because the insiders will have an enhanced incentive to monitor the managers. Second, these insiders themselves will be involved in making strategic and managerial decision making for the firms. Also Hubbard and Palia (1995) argue that the level of ownership can lead to a better alignment between the interests of owners and managers.

Empirical results of Hubbard and Palia (1995) indicate that abnormal returns were highest at moderate levels of ownership. In addition, Wright et al. (2002) found that under moderate levels of CEO ownership, bidder announcement returns were positive. Bhaumik and Selarka (2012) studied Indian firms and found that significant ownership concentration in the hands of company directors may improve M&A performance. These findings give support for the before-mentioned argument.

Acquirer experience

Acquirer experience can also have an influence on M&A performance. Barkema and Schijven (2008) argue that a high level of acquisition experience will guide acquirers to a faster and more efficient integration. Furthermore, less mistakes will be made because they have learnt from the previously made mistakes. Some empirical studies have found that prior M&A experience will enhance the success in future M&A activities (Bruton et al. 1994; Barkema & Schijven 2008), while others have found negative or insignificant results (Hayward, 2002; King et al. 2004). Haleblian and Finkelstein (1999) found that the relationship between acquisition experience and acquisition performance was U-shaped, not positively linear. They concluded that this was caused by moderately experienced acquirers inappropriately applying experience from earlier acquisitions to follow different acquisitions, whereas highly experienced acquirers avoid these missteps.

Historical performance

Historical performance is one of the firm characteristics that has an influence on M&A performance too according to Haleblian et al. (2009). They mention that several authors have paid attention to historical performance in M&As studies. Lang et al. (1989) found that high Tobin's Q (ratio of the market value of the firm's assets to their replacement cost) bidders benefited from higher short-term abnormal returns than low Tobin's Q bidders from M&As, Servaes (1991) concluded the same. In addition, Heron and Lie (2002) showed that M&A accounting performance was higher when bidders with higher market-to-book ratios acquired targets with low market-to-book ratios.

Target's status

Target's status has an impact on the effect of relative size on M&A performance according to empirical findings (Fuller et al., 2002). They considered the target's status and looked at the returns to acquirers in relation to the relative size of the target as compared to the bidder. They found that for listed targets, given an increased relative size of the target to the bidder's, returns were higher for cash offers and more negative for stock offers. For a mix of cash and stock the changes were small. Furthermore, they found that for non-listed targets, given an increased relative size of the target, returns were bigger for stock-financing than for cash-financing bidders. In addition, the quantity and quality of public data available with listed firms is a key difference for potential acquirers. Multiple studies find a significant premium for bidders

targeting a private company compared to acquisitions of publicly listed companies (Aybar & Ficici, 2009; Moeller & Schlingemann, 2005). However, Gubbi et al. (2010) do not find the status of the target to be a significant factor for Indian acquisitions. It seems that the impact of the target's status is complex.

Relatedness

Relatedness is another firm characteristic that can partly determine M&A performance, because relatedness is typically associated with the level of synergy (Lubatkin, 1983). A related cross-border M&A, like a related domestic M&A, can create value for the acquiring firm by spreading fixed costs over more markets. Furthermore, the already considerable amount of knowledge about the products of the acquired firm, the familiarity of the acquired firm industry, and the transfer of management skills can help integrating the two organizations and contribute to synergy. These advantages are generally less likely with unrelated M&As (Datta & Puia, 1995; Harris & Ravenscraft, 1991).

Empirical studies concerning domestic M&As find mixed results about the impact of relatedness on M&A performance. While some studies find a positive relation between relatedness and M&A performance (Hayward, 2002; Singh & Montgomery, 1987), Mateev, 2017, Lubatkin (1987), and Seth (1990) do not find a relation. Palich et al. (2000) found the relation between relatedness of targets and M&A performance to be U-shaped. Concerning cross-border M&A studies, Bleeke and Ernst (1991) find that related acquisitions have a much higher success ratio than unrelated acquisitions. Nicholson and Salaber (2013) find an insignificant impact of relatedness on short-term stock performance. Li et al. (2016) find a negative impact of relatedness on short-term M&A announcement returns for their subsample 2009-2011, while for the subsample 2000-2008 the impact was only insignificantly negative.

Cultural differences

Organizational culture can also influence M&A performance. Organizational culture is seen as very important in determining an individual's commitment, productivity and longevity within the organization (O'Reilly et al., 1991). Differences between the cultures in cross-border acquisitions can lead to resistance by the target firm's management at the time of the acquisition, which leads to higher acquisition costs. In addition, cultural differences in cross-border acquisitions lead to difficulties in post-acquisition sharing and assimilation of

competencies between the bidder and target firm (Datta & Puia, 1995; Michael Geringer et al., 1989).

Datta (1991) found differences in top management styles to have a negative impact on M&A performance, which was measured by asking the respondents for their assessments of the impact of M&As on the performance of the acquiring firm. Also Chatterjee et al. (1992) find that the difference between the two firms' top management cultures are negatively associated with M&A performance, which they measure with short-term stock performance. Weber (1996) found the relationship between cultural difference and the integration process to be negative, but the relationship of cultural difference with financial performance was insignificant.

Complementarity

Larsson and Finkelstein (1999) argue that complementarity is a useful way of explaining M&A success. Complementary differences are the basis for resource redeployment and exploitation from a resource-based view (Kim & Finkelstein, 2009). Because of the interaction of complementary characteristics, value creation is not only created via cost efficiency, value is also created by an enhanced turnover and market share. For example, acquirers can benefit from the acquisition of complementary knowledge from target firms. The extent to which the acquiring firm acquires and learns such knowledge affects M&A performance (Zou & Ghauri, 2008). According to Bauer et al. (2014) complementarity has been studied in terms of top management team complementarity, technological complementarity, strategic and market complementarity, and product complementarity.

Larsson and Finkelstein (1999) find in their case survey that independent of any similarities across joining firms, the presence of complementary operations increased the probability of acquisition success by boosting synergy realization. Also Kim and Finkelstein (2009) find support for the positive effect of complementarity on short-term M&A stock performance while studying acquisitions in the U.S. banking sector.

2.5.3 External factors

Waves

Waves can also influence market reactions to M&As. According to Haleblian et al. (2009), several authors have argued that these temporal waves can influence stock performance. M&A

waves are periods of years with a relatively high M&A activity and contain the peak years (Carow et al., 2004). According to empirical evidence by Carow et al. (2004) announcing M&A deals early in acquisition waves resulted in higher abnormal returns. However, they further reported that early moving bidders only benefited from positive returns when they had superior information, paid with cash, and expanded in related industries during large expansion periods. McNamara et al. (2008) found that firms which acquired early within an acquisition wave achieved positive returns on average, but later acquirers are punished by the market.

National culture

National cultural differences are often seen as a factor that makes M&As more complex and less successful (Hofstede, 1980). National culture determines the 'shoulds' and the 'oughts' of life that are in the minds of a country's citizens (Hofstede, 1980). National culture operates at a deeper level compared to for example organizational culture (Berger and Luckmann, 1967; Hofstede, 1980). Cross-border M&As from culturally dissimilar countries are more likely to fail (Li & Guisinger, 1991). Li et al. (2016) found that cross-border M&As from culturally dissimilar countries have lower announcement returns. In addition, Dikova and Sahib (2013) found that inexperienced acquirers gain smaller abnormal returns when targeting firms from culturally distant countries. However, Morosini et al. (1998) found that national cultural distance had a positive relation with M&A accounting performance.

Legal changes

Several authors have argued that legal changes can influence the attractiveness of M&As and the wealth creation as a consequence (Haleblian et al., 2009). For example, Jarrell and Bradley (1980) and Schipper and Thompson (1983) identify two important legal changes that can influence M&A performance. They identify the 1968 Williams Amendment and the 1969 Tax Reform Act. The 1968 Williams Amendment requires the bidding firms to provide targets 10 trading days to evaluate the tender offer. This could give other bidders the chance to do an offer and increase the competitiveness. Increased competitiveness can lead to an increased bid price, which is detrimental for the bidding firms. The other legal change, the 1969 Tax Reform Act, contained a large reform of the tax system that could also harm bidders' wealth creation. The Tax Reform Act disallows the interest deduction on convertible bonds issued to finance a merger and also taxed negotiable bonds given to the seller as installment payments. This leads to additional costs for the bidders.

The empirical evidence supports the view that legal changes can influence M&A performance. Asquith, Bruner and Mullins (1983), Jarrell and Bradley (1980), and Schipper and Thompson (1983) find that the 1968 Williams Amendment and the 1969 Tax Reform Act did lower bidder returns in M&As. They looked at the year of the M&A deal and determined whether the deal was made before or after the legal changes.

2.6 Hypotheses development

2.6.1 Stock market reaction

In this thesis, the effect of cross-border M&A announcements on the short-term stock market reaction of acquiring firms is examined. In section 2.2 several theories are discussed that can explain this effect in different ways. The synergy, internalization, and resource-based theory predict a positive effect of M&A announcements on short-term stock market reactions, while the agency and hubris theory predict a negative effect.

While cross-border M&As may be partly motivated by agency-related and hubris motives, the synergy motive is the predominant motive for cross-border M&As according to Seth et al. (2000). In addition, Ramakrishnan (2008), Rani et al. (2012a), and Rani et al. (2012b) find that the primary motives for Indian M&As are synergy-related. Because of this importance of the synergy motive when deciding for cross-border M&As, I assume that its impact is much larger than the value-decreasing agency and hubris motives. The synergy motive predicts that firms create greater value by working together in the form of M&As. The synergy theory assumes that M&As will only happen when the management of the bidder and target both expect wealth gains (Berkovitch & Narayanan, 1993; Hankir et al, 2011). These gains can be in several forms. An example is improved production efficiency via economies of scale, i.e. operational synergy. In addition, financial synergy can be achieved, which means a reduced cost of capital. Furthermore, with M&As the acquiring firm can benefit from increased market power (Chatterjee, 1986). According to the synergy theory, these benefits lead to increased value, which should be reflected in positive stock market reactions (Berkovitch & Narayanan, 1993; Hankir et al, 2011).

M&A studies also distinguish cross-border specific M&A motives, the most important ones are strategic asset seeking (Athreye & Kapur, 2009; Luo & Tung, 2007) and foreign market seeking (Buckley et al., 2016). Cantwell and Piscitello (1999) found in their case study that the largest

U.S. and European multinationals acquire foreign firms, in order to access innovation abroad. Furthermore, Buckley et al. (2016) studied 2230 cross-border M&As by Indian firms and found full support for the strategic asset seeking motive and partly support for the presence of the foreign market seeking motive. In addition, Harris and Ravenscraft (1991) argue that the most important motive for cross-border M&As from emerging market countries is strategic asset seeking. Thus, it is evident that strategic asset seeking is the main motive for cross-border M&As by Indian bidders, while foreign market seeking is also an important one.

The resource-based theory and the internalization theory explain the impact of the strategic asset seeking motive in the following way. The resource-based theory predicts that M&As are a means to acquire strategic assets, i.e., scarce or expensive resources and capabilities (Amit & Schoemaker, 1993; Deng, 2009). These strategic assets are essential for the firm's competitive advantage and performance (Barney, 1991). The internalization theory assumes that M&A deals are closed, because in these cases it is more beneficial to acquire a foreign firm than to engage in other forms of partnerships. According to the internalization theory strategic decision makers are rational in this context, i.e., internalization will only happen when expected benefits exceed expected costs. Therefore, shareholders should react positively to the announcement of the cross-border M&A (Buckley & Casson, 2009; Buckley et al., 2016).

Moreover, foreign market seeking gives an opportunity to the firm to exploit their advantages in a foreign market, in order to improve the performance according to the resource-based theory (Zaheer, 1995). The internalization theory explains that firms with a high amount of intangible assets benefit from exporting their intangibles across country borders by closing M&A deals when other partnerships abroad are complicated and costly (Buckley & Casson, 2009; Buckley et al., 2016). Thus, foreign market seeking improves performance, which should result in positive announcement returns.

Most empirical evidence regarding cross-border M&As by non-Indian firms shows positive stock market reactions as a consequence of the M&A announcements (Doukas & Travlos, 1988; Gubbi et al., 2010; Mateev, 2015; Ning et al., 2014, & Tao et al., 2017), while a few studies show these reactions to be insignificant (Kiymaz, 2004) or negative (Aybar & Ficici 2009; Chen and Young, 2010). Furthermore, also M&A studies concerning Indian bidders in many cases show positive stock market reactions (Gubbi et al., 2010; Nicholson and Salaber, 2013; Rani et al., 2012b). However, Rani et al. (2012b) found this reaction to be significantly positive only

for M&A deals financed with stocks instead of financed with cash or a combination of cash and stocks. Furthermore, Kohli and Mann (2012) find no significant announcement returns in their study containing 66 domestic deals in India.

The above-mentioned synergy, resource-based, and internalization theory give arguments why cross-border M&As from emerging markets can influence the performance of the bidder positively. Since the synergy, resource-based, and internalization theory explain the main motives for cross-border M&A deals by Indian firms, in contrast to the agency and hubris theory (Athreye & Kapur, 2009; Buckley et al., 2016; Luo & Tung, 2007; Seth et al., 2000), investors should interpret a cross-border M&A by an India firm as a positive belief in the future. Therefore, the stock prices will increase. Hence, the following hypothesis is formulated:

> **Hypothesis 1:** The announcement of a cross-border M&A by Indian firms leads to a significant positive stock market reaction.

2.6.2 Resource based theory: Impact of the strategic asset seeking motive

In addition, this thesis examines the impact of the strategic asset seeking motive on short-term cross-border M&A announcement returns. As mentioned in section 2.2, firms may engage in cross-border M&As to increase value via efficiencies, financial synergy, collusive synergy, strategic asset seeking, and foreign market seeking. Since Indian firms and many other emerging market firms are mainly motivated by the strategic asset seeking motive (Athreye & Kapur, 2009; Buckley et al., 2012; Luo & Tung, 2007), it is interesting to examine the difference in M&A performance between M&As motivated by the asset seeking motive and M&As motivated by other motives.

According to the asset seeking perspective, with M&As bidders aim to acquire scarce and/or expensive resources and capabilities (Makino et al., 2002). A bidder can augment its own resources and capabilities with the acquired resources and capabilities. M&As are an efficient way to augment their own assets. The resource-based theory regards the firm's strategic assets as essential for the firm's performance (Barney, 1991). The stock market should recognize this strategic asset motive as value enhancing.

Empirical evidence shows that the strategic asset seeking motive leads to increased shareholder value of acquiring firms (Gubbi et al., 2010; Nicholson & Salaber, 2013). Proxies used in these studies for the asset seeking motive are the "service sector" as the main sector for the acquiring firm, the target firm being in a "developed country" (Nicholson & Salaber, 2013), and the target firm being located in a more "advanced economy" (Gubbi et al., 2010).

As India is an emerging market, Indian firms have a big disadvantage in the form of a low level of technology compared to developed market firms. Emerging market firms find it difficult to develop and offer modern, sophisticated products. Hence, it is hard for them to be competitive on an international level (Hitt et al., 2000; Svetličič & Rojec, 1994). Efficiencies, financial synergy, and collusive synergy via cross-border M&As will not be enough to compensate the gap in technology with developed market firms. Indian firms should fill the gap in technology by acquiring targets with a high level of strategic assets which will give them the opportunity to compete on international level. This will lead to enhanced firm performance.

Furthermore, emerging market firms can use their own strengths in combinations with the strategic assets of target firms to create unique complementarity. For example, an acquirer that excels in producing can augment this strength with the strong research and development capabilities of the target. For other potential bidders the target might be less interesting, but for this bidder the resource complementarity is unique and very valuable. Thus, resource complementarity is more valuable than resource similarity (Harrison et al., 2001). Therefore, the wealth gains for M&A deals with a high level of resource complementarity are higher. Harrison et al. (1991) found that resource complementarity was positively associated with M&A performance, while they did not find support for synergy as a consequence of resource similarities. Also Harrison et al. (1998) find support for better M&A performance for acquisitions with resource complementarity.

Therefore, I argue that Indian firms will get better M&A performance when the main M&A motive is to get access to strategic assets like technologies and complement their own resources and capabilities. Three proxies are used to capture the strategic asset seeking motive.

Bidder active in the service sector

The first proxy for strategic asset seeking motive is the bidder being mainly active in the service sector. According to Buckley et al. (2012) Indian firms are primarily motivated to invest abroad to access advanced assets like technologies and knowledge-based abilities. The strategic assets that may be acquired with cross-border M&As improve the performance and competitive advantage of the firm (Amit & Schoemaker, 1993; Ivarsson & Jonsson, 2003). Indian multinationals have a competitive advantage in business services, which are characterized by human resources that are easily re-trainable (Erramilli & Rao, 1993). Therefore, following Nicholson and Salaber (2013), the advantages of asset seeking cross-border M&As by Indian firms are potentially higher for bidding firms with the "service sector" as the main sector, this should be reflected in stock prices in an efficient market.

> **Hypothesis 2a:** Among cross-border M&A announcements by Indian firms, those that involve bidding firms that operate in the service sector will generate greater abnormal returns.

Level of high-technology exports in host country

Indian firms are motivated to engage in foreign M&As, in order to get access to high-end technology (Child & Rodriguez, 2005; Luo & Tung, 2007). According to Jullens (2013) and Rabbiosi et al. (2012) technology not found within the country borders is an important strategic motivation for emerging market firms to acquire a foreign firm. By augmenting the firm's own assets with the target's high-end technology, a unique combination of assets can be created, which leads to a better competitive advantage. This competitive advantage can increase the bidder's performance. The stock market should see such a cross-border M&A motivated by technology seeking as value-increasing. As no data is available regarding the amount of technology per firm, following Ramasamy et al., 2012, I use the proportion high-technology exports to total exports in the host country, which is called the level of technology exports, as a proxy for the target's technology (Ramasamy et al., 2012). I expect that Indian bidders experience higher abnormal returns when targeting firms in countries with a high level of technology exports.

> **Hypothesis 2b:** Among cross-border M&As by Indian firms, bidders' abnormal returns are positively associated with the level of technology exports in the host country.

Target located in a developed country

As mentioned in section 2.2, firms from emerging markets, e.g., India, should acquire firms from developed countries for asset-augmentation, i.e., asset seeking. In this way, Indian firms can augment their own assets with high-value front-end capabilities and resources (Gubbi et al., 2010; Harrison et al., 2001), because developed countries are known for having higher quality assets (Gubbi et al., 2010). Ning et al. (2014) argue that the bidder will probably exchange some strategic assets with the target firm. In this way they can achieve competitive advantages (Barney, 1991), which should be reflected in an increase of their share prices. Therefore, I expect, building on the resource-based theory, that Indian bidders would get higher shareholder value when target firms are located in developed markets.

> **Hypothesis 2c:** Among cross-border M&A announcements by Indian firms, those that involve target firms in developed countries will generate greater abnormal returns for the bidders.

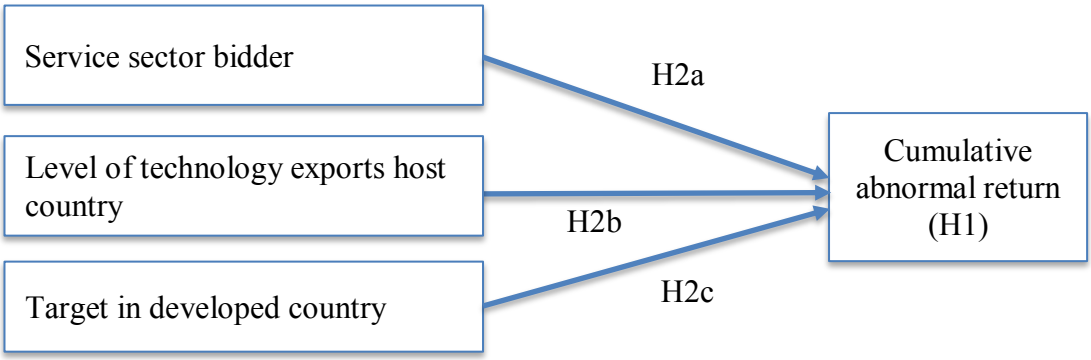

Figure 3. Research model.

3. Method and data

In this chapter, the methodology used in prior studies, the methodology used in this thesis, and the data used in this thesis are described. In section 3.1 the measurement of M&A performance is described. Firstly, arguments are given for choosing short-term stock performance, using the event study methodology over other measures. Secondly, the models for measuring normal performance are described. Thirdly, the estimation period and event window are described. Lastly, the significance tests for hypothesis 1 will be explained. In section 3.2 the choice for the OLS regression technique will be explained. In subsection 3.2.1 to 3.2.3 the regression models will be described including the control variables and significance tests for hypotheses 2a, 2b, and 2c. The data is described in section 3.3. Firstly, the data collection is described. Secondly, information about the sample is given.

3.1 M&A performance

3.1.1 Choice for short-term stock performance

Different scholars have used different measures to asses M&A performance. Finance and economic scholars often used accounting and financial (stock based) performance. In contrast, in the field of strategic management and organizational behavior, subjective overall acquisition performance is often used (Papadakis & Thanos, 2010). Accounting performance has the advantage that it measures the achievement of synergies well (Tuch & O'Sullivan, 2007). However, the accounting performance of a firm does not offer information specific to one M&A deal, detecting the impact of an M&A deal across data of multiple years can be very difficult (Datta, 1991; Montgomery & Wilson, 1986). Furthermore, accounting performance reflects past performance, not expected future earnings (Montgomery & Wilson, 1986). Subjective M&A performance has the advantage that it is a multidimensional measure and it considers multiple motives (Larsson & Finkelstein, 1999). The disadvantages of subjective M&A performance are the possibility of managerial bias and the need to find respondents (Schoenberg, 2006).

Financial or stock performance has the advantage of easy access to the needed data (Schoenberg, 2006). Furthermore, the capital market provides a fully objective assessment and abnormal returns have no bias from firm executives as it is a direct measure of shareholder value (Lubatkin and Shrieves, 1986). However, stock performance does not measure realized performance, but the expectations of investors. In addition, it can only measure M&A

performance of listed acquirers. Short-term stock performance has the advantage over long-term stock performance that it can better capture the effect of an acquisition on stock performance, because long-term stock performance considers performance aggregated over a long period. In addition, share prices reflect all available information in an efficient way according to the efficient market hypothesis. Depending on the form of efficiency, the stock market reflects all past information to all public and private information (Malkiel & Fama, 1970). Short-term stock market reactions of acquiring firms successfully predict ex post performance, which gives confidence in using them as a reasonable measure of M&A performance (Finkelstein & Haleblian, 2002). Furthermore, Healy et al. (1992) find that there is a strong positive relation between post-merger increases in operating cash flows, i.e., accounting performance, and abnormal stock returns at merger announcements. This indicates that investors' expectations predict accounting performance well.

Following several M&A studies (Aybar & Ficici, 2009; Gubbi et al., 2010; Nicholson & Salaber, 2013; Ning et al, 2014; Tao et al., 2017), I use the event study methodology to determine the presence of short-term stock market reactions around M&A announcements.
The event study methodology is very often used in the M&A field (Zollo & Meier, 2008). In the event study methodology, short-term M&A performance is operationalized with cumulative abnormal returns around the announcements of M&A deals (Finkelstein & Haleblian, 2002; McWilliams & Siegel, 1997). Abnormal returns are the actual returns deducted by the expected or normal returns. Abnormal returns are based on daily stock price fluctuations (MacKinlay, 1997). Following Aybar and Ficici (2009), this thesis assumes that at least the semi-strong form of the efficient market hypothesis holds. This means that stock prices reflect all publicly available information (Malkiel & Fama, 1970). Abnormal returns are attributed to M&As, when there is no confounding event before or after the M&A announcement.

3.1.2 Models for normal returns

The expected returns, also called normal returns, can be computed by using a statistical model, e.g., the market model or the constant mean return model, or by using an economic model, e.g., the capital asset pricing model (MacKinlay, 1997). Most of the M&A studies use the market model to determine the expected returns, in order to calculate the abnormal returns (Aybar & Ficici, 2009; Gubbi et al., 2010; Tao et al., 2017), while Nicholson and Salaber (2013) used the market-adjusted return method. The market model is a statistical model which bases the

expected return on a relation between the past actual returns and the past market index returns. In contrast, the market-adjusted return method assumes that the expected returns equal the market index returns. The market-adjusted return method is also a statistical model (Brown & Warner, 1985; MacKinlay, 1997).

I use the market model (MM) to calculate the expected returns, because it has an advantage over the constant mean return model, as it considers market index return. Furthermore, the general finding with the Arbitrage Pricing Theory, a type of economic model, is that additional factors add relatively little explanatory power in addition to the market factor. In addition, the Capital Asset Pricing Model, another economic model, has little advantage over the market model. Therefore, the use of the Capital Asset Pricing Model has decreased in favor of the market model. Generally, statistical multifactor models have limited gains for event studies, because of little explanatory power of additional factors (MacKinlay, 1997).

The formula of the market model is as follows:

$$AR_{it} = R_{it} - (\alpha + \beta_i R_{mt}) \quad (1)$$

In this formula AR_{it} represents the abnormal returns of a firm. The i stands for the firm and the t stands for the time. R_{it} stands for the actual stock return of the firms. R_{mt} stands for the return of the market index. The coefficients α_i and β_i are OLS parameters estimated through the regression of R_{it} on R_{mt} (Tao et al, 2017).

Furthermore, I use the market-adjusted return model (MAR) in addition to the market model to check the robustness. In this method, I substract the return of the market index, in this case the S&P BSE SENSEX index, from the actual return, as can be seen in equation 2. The advantage of the market-adjusted return model is that no estimation period is required to obtain the abnormal returns and no other data is needed, only the actual returns and the market index returns (Brown & Warner, 1985; MacKinlay, 1997).

$$AR_{it} = R_{it} - R_{mt} \quad (2)$$

3.1.3 Estimation period and event window

In the market model, the returns of the market index and the acquiring firm during the estimation period are used to compute the expected returns, see figure 4. The event window around the event date, the M&A announcement, is the period of interest. For this event window cumulative abnormal returns are computed (Aybar & Ficici, 2009; Gubbi et al., 2010; MacKinlay, 1997; Tao et al., 2017).

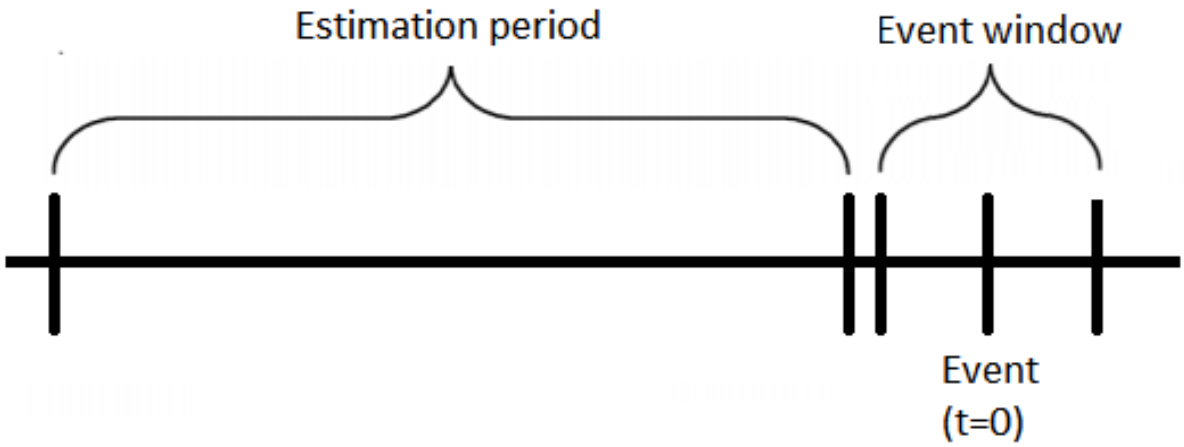

Figure 4. Estimation period and event window across timeline. Adapted from Campbell & MacKinlay (1997)

Some use a relatively small estimation period of 90 days (Ning et al., 2014) for the previous stock data to estimate the normal returns, while others use a larger estimation period of 240 days (Gubbi et al., 2010) or 255 days to determine the expected return in the market model (Aybar & Ficici, 2009). Following Gubbi et al. (2010), I estimate equation 1 by using a 240-day estimation period from t= -6 to t= -245, in which t=0 is the day of the M&A-announcement.

Following previous studies, I aggregate abnormal returns around a few days, the event window, into cumulative abnormal returns (CARs) as can be seen in equation 3 (Aybar & Ficici, 2009; Gubbi et al., 2010; MacKinlay, 1997; Ning et al., 2014; Tao et al., 2017). CAR is "the cumulative abnormal return for the period t=day 1 until t=day n" (Tao et al., 2017, p. 196).

$$CAR_t = \Sigma\, AR_t \qquad (3)$$

Most of the previous studies used event windows of 11 days (-5,5), see Gubbi et al. (2010), Ning et al. (2014), and Tao et al. (2017). Exceptions include, Aybar and Ficici (2009), who used a larger event window of 21 days and Nicholson & Salaber (2013), who used a smaller

event window of 5 days. However, "a short event window may not catch the effect of the event if the information comes out after the closing of the market and does not arrive in the public domain until the next day (Aybar & Ficici, 2009)" (Tao et al., 2017, p. 196). In addition, insider trading and information leakage might take place affecting the stock prices before the announcement (Cumming & Li, 2011; Faccio et al., 2006). Hence, I use the event windows (-5,-1), (-2,-1), (-1,1), (-2,2), (5,5), (0,1), (0,2) and (0,5) to determine the stock market's short-term reaction to the M&A-announcement. With the market-adjusted return model, no estimation period is required to obtain the abnormal returns (Brown & Warner, 1985; MacKinlay, 1997).

3.1.4 Hypothesis 1 testing

Next, the significance of the stock market reactions should be determined. Most previous studies tested the significance of the stock market reactions with t-tests (Gubbi et al., 2010; Nicholson & Salaber, 2013; Ning et al, 2014; Tao et al., 2017). Aybar and Ficici (2009), Nicholson and Salaber (2013), and Gubbi et al. (2010) also used the Wilcoxon signed-rank test to eliminate the effect of outliers by computing the significance of median CARs. To determine whether the CAR is significantly different from zero, I test the statistical significance of the average of the CARs with a one-sample t-statistic (equation 4), in which s_{CAR} is the standard deviation of the cumulative abnormal returns of the different firms.

$$t = \frac{Mean\ CAR}{scar\ /\sqrt{n}} \tag{4}$$

Furthermore, I use the Wilcoxon signed-rank test to test hypothesis 1 with median CARs, see equation 5. In this equation r_i^+ is the rank of the positive absolute values of the CARs. In order to determine the significance, z-values are computed, see equation 6 (Moore et al., 2009).

$$W^+ = \Sigma\, r_i^+ \tag{5}$$

$$z = \frac{W - \frac{n(n+1)}{4}}{\sqrt{(\frac{n(n+1)(2n+1)}{24})}} \tag{6}$$

Each test is conducted using both the MM and the MAR model. I perform the tests at the one-tailed 1%, 5%, and 10% significance levels. This means that with statistically significant results, I find data that gives evidence against the null hypothesis so strong that it would happen no

more than 1%, 5%, and 10% of the time, respectively (Moore et al., 2009). When positive statistical significance is determined, hypothesis 1 can be confirmed. If not, the data in this thesis does not give statistical support for hypothesis 1.

3.2 Impact of the strategic asset seeking motive

In order to test the impact of the independent variables on the abnormal returns, a statistical technique has to be chosen. According to Hair et al. (2014), in behavioral science regression analysis and conjoint analysis are the two techniques to choose from when the dependent variable is a metric variable, like the CARs in this thesis, and multiple independent variables are included. However, conjoint analysis seems to be exclusively used in market and consumer research, it is not an appropriate technique in a finance context. Following several M&A studies, I use the regression analysis technique, in order to test the impact of predictor variables on the abnormal returns (Gubbi et al., 2010; Kohli & Mann, 2012; Morck & Yeung, 1992; Nicholson & Salaber, 2013).

Kohli and Mann (2012) are one of the few that used Weighted Least Square (WLS) regressions, because this technique controls for the heteroscedasticity problem. However, Cohen et al. (2014) argue that WLS regressions have some serious issues, making them only favorable with a very large sample size or a very high level of heteroscedasticity. Firstly, choosing the right weights is very difficult. Inaccurate weights lead to similar performance of WLS compared to ordinary least squares (OLS) regressions, while the coefficients should be similar, too. Secondly, the measures of the standardized effect size, e.g., R^2, do not have a straightforward meaning like with OLS regressions. Considering the above-mentioned, following the majority of M&A studies (e.g., Andriosopoulos et al., 2016; Gubbi et al., 2010; Morck & Yeung, 1992; Nicholson & Salaber, 2013), I use OLS regression models.

Similar to hypothesis 1, for hypotheses 2a, 2b, and 2c stock market reactions are measured with abnormal returns using the event study methodology, because this methodology has become a standard in evaluating stock market reactions to a specific event (Aybar & Ficici, 2009). I use the mean CAR (MAR) over 3 days (-1,1) as the dependent variable for the OLS regressions to test hypotheses 2a until 2c, because this event window captures the major part of the stock market reaction. In addition, I use the CARs over the event windows (-5,-1) and (0,2). The CARs are regressed on the independent and control variables using separate regression models for each hypothesis, because inputting these variables in the same regression model could result

in multicollinearity problems (Nicholson & Salaber, 2013). I do this using the CARs calculated via both the MM and MAR model. For hypotheses 2a, 2b, and 2c several factors are considered. First, the sector of the bidder is considered in hypothesis 2a. Second, the level of technology in the host country is considered in hypothesis 2b. In hypothesis 2c, the level of development in the target's country is considered.

3.2.1 Regression model hypothesis 2a

Predictor variable: Service sector

To test hypothesis 2a the sector of the bidder has to be considered. The dummy variable SERVICES takes the value 1, if the acquirer's main sector is a service sector, 0 otherwise. This is a proxy for the competitive advantage and the ability to expand this advantage of a bidder, which has been used by Nicholson & Salaber (2013) as a measure for the strategic asset seeking motive. The SIC classification is used to determine whether it is a service sector. Acquirers with a SIC code between 7000 and 8900 are classified as firms operating in the service sector (Siccode, s.a.).

Control variables

In addition to the predictor variable, several other variables may influence the relationship between M&A announcements and abnormal returns. Therefore, I use a set of control variables. For a complete list of all variable defintions, see table 1. As Aybar and Ficici (2009) find a positive impact of the level of control on the firm value, I use the *proportion acquired* (PACQ) as a control variable.

The potential of synergies depends partly on the similarity between acquirer and target industries. If they belong to the *same industry*, synergies are more likely to be achieved with cross-border M&As (Nicholson & Salaber, 2013). Many studies have confirmed that a higher abnormal return is reported for related acquisitions over non-related ones (Akbulut & Matsusaka, 2010; Denis et al., 2002; Moeller & Schlingemann, 2005). The dummy variable RELATEDNESS takes the value 1 if the bidder and target share the same two-digit SIC code, 0 otherwise.

Similarly, the bidder's *firm size* can also influence the tested impact and needs to be controlled. Firm size (SIZE) is measured by the bidder's total assets in Indian crores (1 Indian crore = 10

million Indian rupees = €125,000 approx.), following Aybar and Ficici (2009). The natural logarithm of the total asset value is used in the correlation matrix and the regressions.

The target firm being located in the *Asian continent* is also a control variable. The dummy variable TASIAN gets the value 1 if the target is located in an Asian country, 0 otherwise. This dummy variable has also been used by Aybar and Ficici (2009).

Multiple studies find a significant premium for bidders targeting a private company compared to acquisitions of publicly listed companies (Aybar & Ficici, 2009; Moeller & Schlingemann, 2005). However, Gubbi et al. (2010) do not find the status of the target to be a significant factor for Indian acquisitions. The quantity and quality of public data available with listed firms is a key difference for potential acquirers. Therefore, the *status of the target* is another control variable I use. The dummy variable TLISTED gets the value 1 for listed target firms, and 0 for unlisted firms. The regression model to test hypothesis 2a is as follows:

$$CAR = \alpha + \beta\, SERVICES + \beta\, PACQ + \beta\, RELATEDNESS + \beta\, SIZE + \beta\, TASIAN + \beta\, TLISTED + \varepsilon$$

3.2.2 Regression model hypothesis 2b

Predictor variable: Level of technology exports

The level of technology exports (TEXTECH) is the proportion of high-technology exports to total manufactured exports in the host country and is a proxy for the level of technology of the target firm (Ramasamy et al., 2012). This proportion is extracted from the World Bank Group. This proxy has been used earlier by Ramasamy et al. (2012) for the asset seeking motive. However, they did not use it in the context of abnormal returns. In the correlation matrix and the regressions, the natural logarithm of the level of technology plus 1 percent point is used. The control variables used are the same as the ones used in the model for testing hypothesis 2a. The regression model to test *hypothesis 2b* is as follows:

$$CAR = \alpha + \beta\, TEXTECH + \beta\, PACQ + \beta\, RELATEDNESS + \beta\, SIZE + \beta\, TASIAN + \beta\, TLISTED + \varepsilon$$

3.2.3 Regression model hypothesis 2c

Predictor variable: Developed country

The dummy variable TDEVELOPED takes the value 1 if the target is located in a developed country. The countries that are a member of the Organisation for Economic Co-operation and Development (OECD) and/or are listed as an advanced economy according to the IMF are

assessed as a developed country. These memberships are often used as proxies for developed countries (Buckley et al., 2009; Gubbi et al., 2010; Nicholson & Salaber, 2013). The control variables used are the same as the ones used in the model for testing hypothesis 2a. The regression model to test *hypothesis 2c* is as follows:

$$CAR = \alpha + \beta\, TDEVELOPED + \beta\, PACQ + \beta\, RELATEDNESS + \beta\, SIZE + \beta\, TASIAN + \beta\, TLISTED + \varepsilon$$

3.2.4 Hypotheses 2a, 2b, and 2c testing

The model fit is be determined by computing the adjusted R^2. The square of the sample correlation (R^2) indicates the explaining value of the model, i.e., the variance of the dependent variable that is explained by the independent variables. The adjusted R^2 considers the number of independent variables and sample size, which makes it useful when comparing different regression equations with different numbers of control variables (Hair et al., 2014). Furthermore, an F-statistic determines the statistical significance of the model. The impact of the predictor variables of hypotheses 2a, 2b, and 2c is estimated with the corresponding β-coefficients. To test the significance of the impact per hypothesis t-tests are performed, see equation 7. Via p-values the two-tailed significance is determined at the 1, 5, and 10 significance levels.

$$t = \frac{b}{se\ (\mathrm{b})} \tag{7}$$

3.3 Data

3.3.1 Data collection

The data is collected in the following way. The Zephyr database (part of ORBIS) is used for the involved firm names and announcement dates of cross-border M&A announcements. Furthermore, Yahoo finance is used for the stock prices around the announcement dates and Yahoo finance and bseindex.com for the data regarding the S&P BSE SENSEX market index. Nexis Uni is used to check for confounding events. The data sources used for all variables are listed in table 1.

Table 1: *List of variable definitions and sources of data*

Panel A: Predictor variables	
Variable	Definition and source (in parentheses)
CAR	Cumulative abnormal return. The sum of daily returns in excess of the expected returns during an event window (Yahoo Finance and bseindex.com)
SERVICES	Dummy variable service sector, takes the value 1 if the acquirer's main sector is a service sector (SIC code between 7000 and 8900), 0 otherwise (Zephyr database)
TEXTECH	Level of technology host country, computed as the proportion of high-technology exports to total manufactured exports in the host country. In the correlation matrix and regressions, the natural logarithm of the level of technology in percentage plus 1 percent point is used (World Bank Group)
TDEVELOPED	Dummy variable host country is a developed country, takes the value 1 if the target is a member of the OECD and/or is listed as an advanced economy according to the IMF, 0 otherwise (OECD and IMF)
Panel B: Control variables	
Variable	Definition and source (in parentheses)
PACQ	Level of control. Proportion of target firm acquired (Zephyr database; checked with Nexis Uni)
RELATEDNESS	Dummy variable for same industry, takes the value 1 if the bidder and target share the same two-digit SIC code, 0 otherwise (Zephyr database)
SIZE	Acquirer's pre-deal total assets in Indian crores (1 Indian crore = €125,000 approx.). In the correlation matrix and regressions the natural logarithm of the total asset value of the acquirer is used (Moneycontrol.com)
TASIAN	Dummy variable target continent, takes the value 1 for Asian targets, 0 otherwise (Zephyr database)
TLISTED	Dummy variable target status, equals to 1 for listed targets, 0 otherwise (Zephyr database)

3.3.2 Data sample

In order to determine the sample, I use the following criteria. First, I select only Indian acquirers. Second, I select the time period of announcement on and after 01/01/2008 and up to and including 31/12/2016. Third, only deals, in which the acquirer is listed on the Bombay Stock Exchange, are included. I chose firms listed on the Bombay Stock Exchange, because more Indian firms are listed on the BSE than on other stock exchanges, e.g., the National Stock Exchange of India. In this way, I could include more deals in the sample. Furthermore, the BSE is used in most published studies related to India, which facilitates comparison of this thesis to other studies (Douma et al., 2006). I only used listed firms to be able to compute the stock market reactions. Fourth, only deals of the type merger or acquisition are included. This gave an initial sample of 448.

I imposed several additional restrictions. I only used the deals with stock data available 246 days before the announcement until 5 days after the announcement. Therefore, the sample size became smaller. In addition, I excluded deals, in which the acquiring firms announced two M&A deals with overlapping event windows. Furthermore, for a few deals not all the data regarding the control variables were accessible, those deals have also been deleted from the sample. On top of that, I omitted the deals that could have biased CARs as a consequence of confounding events. The search for these confounding events led to the exclusion of 100 deals and two changed announcement dates, a complete list with the findings of this search is available on request. In addition, I adopt a restrictive definition of M&As. Following Hijzen et al. (2008) and Lehto and Böckerman (2008), only M&As based on an ownership stake of at least 50% in the target are included.

Below, I give more information about the sample. Europe and North America are the main target continents, see table 2. Europe is targeted 63 times, while North America is targeted 48 times within the sample of 166 deals. Still, Asia and Africa are important export continents for India too, with a frequency of 22 and 21, respectively. A South American firm is targeted 8 times. Oceania is targeted only 4 times within this sample.

Table 2: *Continents of the target firms*

Continent	Europe	North America	Asia	Africa	South America	Oceania	Total
N	63	48	22	21	8	4	166

The United States of America (U.S.) is targeted more often than any other country within this sample. 44 of the 166 acquisitions involve a target firm in the U.S. The frequency of 44 deals equals to 26.5% of all deals within this sample, see table 3. The second most targeted country is the United Kingdom (U.K.). 18 (10.8%) out of the 166 deals are targeted in the U.K. 12 deals (7.2) targeted a South African firm while French firms are targeted 8 times (4.8%). In addition, Brazil, Germany, Spain, and Switzerland are targeted 6 times (3.6%) each. The other countries are targeted less than 6 times. Concerning the target firms' status, most deals (98.2%) concern target firms that are unlisted, while only 3 deals (1.8%) concern listed target firms.

Table 3: *Deals per target country and target status*

Target country with a frequency of at least 6	N	% of sample
United States of America	44	26.5
United Kingdom	18	10.8
South Africa	12	7.2
France	8	4.8
Brazil	6	3.6
Germany	6	3.6
Spain	6	3.6
Switzerland	6	3.6

Target status	N	% of sample
Listed	3	1.8
Unlisted	163	98.2
Total	166	100

57 deals (34.3%) involve acquirers that provide services, see table 4. In contrast, the majority (109 deals; 65.7%) of the acquirers offer mainly products instead of services. Concerning the

relatedness, 56.6% of the deals (94 deals) involve acquirers and targets operating in related sectors, these are related M&As.

Table 4: *Acquirer sector and relatedness of deals*

Acquirer sector	N	% of sample
Service-related	57	34.3
Product-related	109	65.7
Relatedness	N	% of sample
Related	94	56.6
Unrelated	72	43.4
Total	166	100

4. Empirical results

4.1 Univariate analysis

Figure 5 shows a visualization of the evolution of average abnormal returns per day from 5 days before until 5 days after the M&A announcements. The figure shows average abnormal returns calculated with both the market model and the market-adjusted return model. This figure shows with a high increase on day 0 that the average abnormal return is particularly different from zero on the day of the announcement. This indicates that the market reacts quickly to M&A announcements.

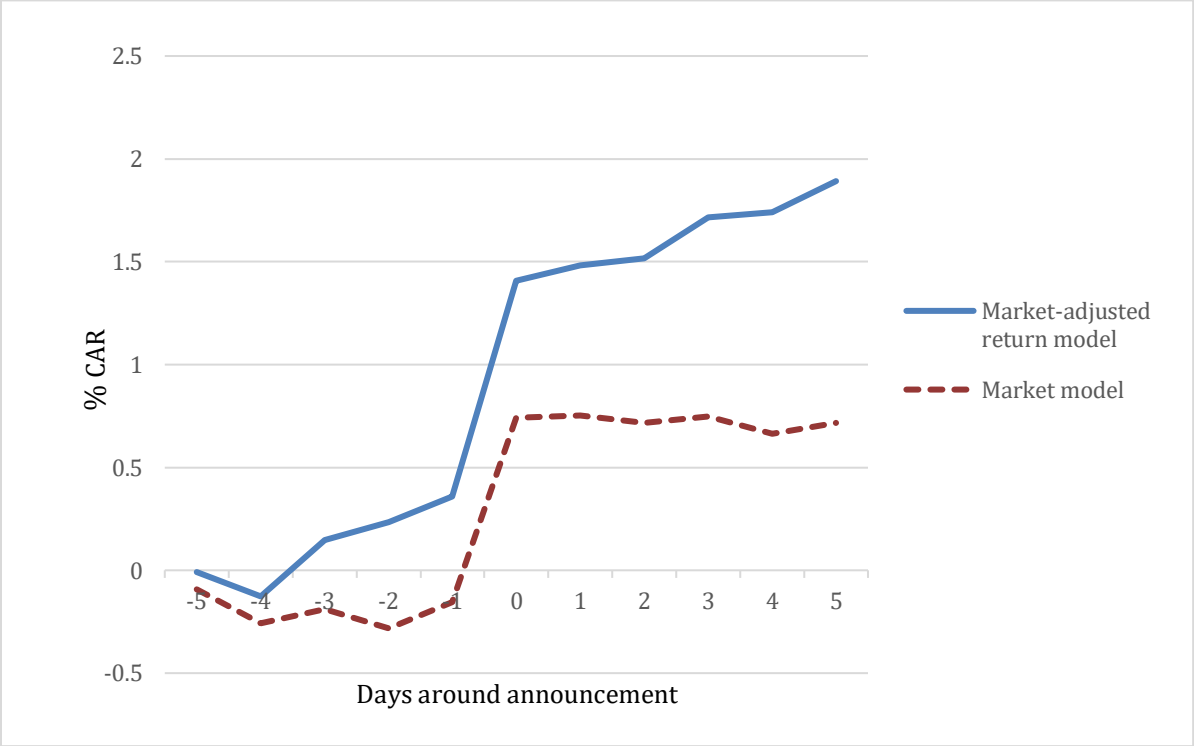

Figure 5. Evolution of acquirer CARs around M&A announcement

Table 5 presents the univariate statistics of all variables used in this thesis. The final sample contains 166 M&A deals. The first ten variables (panel A) are dependent variables. The three variables after them (panel B) are the predictor variables, while the last five variables (Panel C) are the control variables. A complete list of all variable definitions can be found in table 1.

Table 5: *Univariate statistics*

N = 166. WSR is the Wilcoxon-signed rank statistic. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level

Panel A: Winsorized CARs around M&A announcements

Event window	Mean	Median	Std. Dev.	Minimum	Maximum	% Positive returns	T-stat	WSR Z-value
MAR (-5,-1)	0.004	0.004	0.053	-0.130	0.120	54%	1.064	1.049
MM (-5,-1)	-0.001	-0.002	0.052	-0.120	0.120	48%	-0.174	-0.378
MAR (–2,-1)	0.001	-0.002	0.040	-0.110	0.100	47%	0.417	-0.017
MM (–2,-1)	0.000	-0.001	0.038	-0.100	0.100	48%	0.139	-0.339
MAR (-1,1)	0.013	0.007	0.048	-0.080	0.160	60%	3.411***	2.829***
MM (-1,1)	0.011	0.003	0.047	-0.080	0.160	57%	2.942***	2.384***
MAR (-2,2)	0.013	0.007	0.063	-0.120	0.190	57%	2.680***	2.236**
MM (-2,2)	0.008	0.006	0.055	-0.100	0.130	53%	1.860**	1.446*
MAR (-5,5)	0.019	0.019	0.078	-0.190	0.240	66%	3.054***	3.153***
MM (-5,5)	0.006	0.009	0.076	-0.190	0.210	58%	1.097	1.171
MAR (0,1)	0.012	0.007	0.043	-0.080	0.120	60%	3.455***	3.338***
MM (0,1)	0.010	0.004	0.041	-0.080	0.110	60%	3.075***	2.769***
MAR (0,2)	0.003	0.005	0.023	-0.060	0.050	66%	1.870**	2.758***
MM (0,2)	0.013	0.004	0.053	-0.100	0.150	57%	3.070***	2.503***
MAR (0,5)	0.014	0.009	0.068	-0.120	0.240	57%	2.737***	2.166**
MM (0,5)	0.007	0.006	0.068	-0.130	0.220	54%	1.401*	0.822

Panel B: Independent variables

	Mean	Median	Std. Dev.	Minimum	Maximum
SERVICES	0.343	0	0.476	0	1
TDEVELOPED	0.735	1	0.443	0	1
TEXTECH	0.169	0.182	0.102	0.023	0.655

Panel C: Control variables

	Mean	Median	Std. Dev.	Minimum	Maximum
PACQ	0.928	1	0.154	0.500	1
RELATEDNESS	0.566	1	0.497	0.000	1
SIZE	6385	1540	12277	2.850	71398
TASIAN	0.133	0	0.340	0	1
TLISTED	0.018	0	0.134	0	1

CARs

Panel A of table 5 presents the CARs and the results for the one-sample t-tests and Wilcoxon signed-rank tests of the mean and median CARs. Exclusion of deals with confounding events did not solve the problem of outliers regarding CARs. Therefore, I winsorized the CARs at their 2nd and 98th percentile values. The univariate statistic of the unwinsorized CARs can be found

in appendix A. With the market model the slope β, which is the market sensitivity of security i on day t (Henderson, 1990), has a mean of 0.701 during the estimation period. This means that during the estimation period for all acquirers on average an increase in return of 0.701% is retained on day t given an increase in the SENSEX market index of 1% on the same day.

During the pre-announcement event windows (-5,-1) and (-2,-1) mean and median CARs are insignificant, using the market-adjusted return model and the market model. This does not give an indication for insider trading and information leakage. This was to be expected since insider trading and information leakage is prohibited by Indian law (Securities and Exchange Board of India, 1992).

Using the market-adjusted return model the mean CARs for the event windows (-1,1), (-2,2), (-5,5), (0,1), (0,2), and (0,5) are 1.3%, 1.3%, 1.9%, 1.2%, 0.3%, and 1.4%, respectively. Out of these CARs, the mean MAR (0,2) is significant at the 5% level, the other mean CARs mentioned are significant at the 1% level with the MAR model. The medians for these event windows are 0.7%, 0.7%, 1.9%, 0.7%, 0.5%, and 0.9%. They are all significant at the 5% and some are even significant at the 1% level.

Using the market model, the mean CARs for the event windows (-1,1), (-2,2), (0,1), (0,2), and (0,5) are 1.1%, 0.8%, 1.0%, 1.3%, and 0.7%, respectively. The significance levels range from 1% to 10%, depending on the event window. The median CARs for the event windows (-1,1), (-2,2), (0,1), and (0,2) are 0.3%, 0.6%, 0.4%, and 0.4%, respectively. With the median CARs the significance levels range from 1% to 10%, again depending on the event window. In contrast to the market-adjusted return model, the market model shows no significant mean and median stock market reactions for the event window (-5,5). The event window (0,5) also shows no significant median CAR, which is also in contrast to the findings, using the market-adjusted return model. The difference in results between the two models can be explained as follows. The market-adjusted return model uses the market portfolio to determine the normal return. The market model is more advanced, it also considers an α and β based on an OLS regression of the acquirer's return on the market portfolio's return (MacKinlay, 1997). Furthermore, multiple confounding events during the estimation period could distort the abnormal return calculations with the market model. However, I only checked for confounding events during the event windows, not during the estimation periods.

The findings using the market model indicate that stock investors react to M&As shortly after or around the announcement dates. Looking at the results, it is clear that the short event windows with the market model all have higher mean and median CARs than the relatively longer event windows. Tao et al. (2017) even found, in their study of Chinese M&As, that the stock market reactions are only significant for the event windows (-1,0), (0,1), and (-1,1), not for the event windows (-2,2) and (-5,5). Kohli and Mann (2012), an Indian study, found a slightly different pattern using the market model. They found the significance to drop starting from 10 days after the announcement.

These results differ from Gubbi et al. (2010) as they found a significant mean CAR (-5,5) of 2.58% for cross-border M&A announcements by Indian firms, whereas I did not find a significant mean CAR (-5,5) with the market model. However, the abnormal returns (-1,1) are similar to Kohli and Mann (2012) who found a mean CAR (MM) of 1.19% compared to the 1.1% in this thesis. The univariate statistics found in this thesis are also comparable to Nicholson and Salaber (2013) who found positive CARs around the event with a positive peak on event day 0.

The percentage of positive CARs during the pre-announcement event windows differs between 47% for MAR (-2,-1) and 54% for MAR (-5,1). Around the M&A announcements the percentage of positive CARs in this thesis ranges between 53% for the 5-day event window (market model) and 66% for the 11-day event window (market-adjusted return model) depending on the event window and used method. Gubbi et al. (2010) found a positive abnormal return for the event window (-5,5) in 59% of the cases, which is very comparable to the 58% in this thesis (market model). The post-announcement event windows have positive CARs in 54% (MM (0,5)) to 66% (MAR (0,2)) of the cases.

To sum up, panel A gives support for hypothesis 1: “The announcement of a cross-border M&A by Indian firms leads to a significant positive stock market reaction”. Using both the market and market-adjusted return model all mean and median CARs in the event windows around and after announcement, except the mean and median MM (5,5) and the median MM (0,5), are statistically significantly higher than zero at the 10% significance level. This means that the mean and median stock market reactions to cross-border M&A announcements by Indian firms are significantly positive. The pre-announcement event windows do not show significant results. The results are in line with other Indian cross-border M&A studies (Gubbi et al., 2010;

Kohli & Mann, 2012; Nicholson and Salaber, 2013). However, they contradict some cross-border M&A studies regarding other emerging countries. For example, Aybar and Ficici (2009) studied cross-border M&As by firms from different emerging markets and found negative stock market reactions. In addition, Chen and Young (2010) studied Chinese cross-border M&As to find negative stock market reactions.

Independent variables

Panel B of table 5 shows the independent variables. The first independent variable is the dummy variable service sector of the acquiring firm (SERVICES). 34.3% of the acquirers in the sample are mainly active in the service sector. Nicholson and Salaber (2013) had a very similar percentage service sector acquirers, namely 34.0% (69 out of 203), while Gubbi et al. (2010) had a higher percentage of 42.4% (180 out of 425 deals). The predictor variable TDEVELOPED is also a dummy variable. 73.5% of the targets are located in a developed country. This is less than the 82.8% in the sample of Nicholson and Salaber (2013), but very comparable to the 71.5% found by Gubbi et al. (2010). This means that in this sample, as well as the samples of Nicholson and Salaber (2013) and Gubbi et al. (2010), considerably more than half of the M&A announcements were targeted at firms in developed countries. The last predictor variable is the level of technology exports in the target country (TEXTECH). Since the distribution of the data initially was not close to a normal distribution, following Gökmen and Turen (2013), the natural logarithm of the level of technology in percentage has been used for the regression analysis. This logging gave a few negative values. Therefore, I added 1 percent point to all original values, which leads to only positive logged values. The mean value of TEXTECH is 16.9%, which means that in the average target country 16.9% of the manufactured products are high-technology products. The median has a value of 18.2%, which is slightly higher than the mean. This means that the distribution of the level of technology is skewed to the left. The average spread around the mean, the standard deviation, is 10.2%. The target country with the highest level of technology has a value of 65.5%, which means that 65.5% of the manufactured export products in that country have a high R&D intensity.

Control variables

Panel C of table 5 shows the control variables. Proportion acquired (PACQ) ranges from 50% to 100%. On average, 92.8% of the target is acquired in this sample. This is higher than the

86% of Chakrabarti (2007). In most of the deals from this sample, the acquiring firm obtains a stake of 100% in the target firms. The standard deviation is 15.4%. The control variable RELATEDNESS shows that 56.6% of the deals in this sample occur between firms in similar sectors. This proportion is quite similar to the 62% found by Chakrabarti (2007), but much lower than the 200 out of 202 cross-border M&As in the sample of Kohli and Mann (2012). The pre-deal total asset (SIZE) variable has a mean value of 6,385 Indian crores (equals to approximately €800 million; 1 Indian crore = €125,000) and a median of 1,540 Indian crores. The variable is right skewed. Gubbi et al. (2009) had a sample with a slightly lower mean firm size. They found an average of 1.45 billion U.S. dollars, which equaled to approximately 5,800 Indian crores (they used 1 U.S. dollar = 40 Indian rupees to compute the size in U.S. dollars). The dummy variable TASIAN shows that 13.4% of the deals involve targets that are located in the Asian continent. The dummy variable TLISTED shows that 1.8% of the targets are listed, which means that most targets in this sample are not listed. This is quite a low rate, compared to the 45% (1 – 0.55 for private target) in the sample of Gubbi et al. (2010).

4.2 Correlation matrix

Table 6 presents the Pearson's correlation matrix. Looking at the correlations of the independent variables, all three independent variables are significantly related to each other. Furthermore, table 6 shows that the control variable PACQ is significantly correlated with all three independent variables. However, Nicholson and Salaber (2013) found that PACQ was not significantly correlated with SERVICES and TDEVELOPED. Gubbi et a. (2010) did not find a significant relationship of PACQ with TDEVELOPED either. In accordance with Nicholson and Salaber (2013), RELATEDNESS is significantly correlated with SERVICES. TASIAN is significantly correlated with SERVICES and TDEVELOPED. Moreover, the control variable TASIAN is correlated to the control variables PACQ and TLISTED. I ran variance inflation factor (VIF) tests to test for multicollinearity. They showed that there is no severe form of multicollinearity since all VIFs are below 5 (Hair et al., 2014). Still, because of reasonable correlation coefficients I am cautious regarding collinearity and following Nicholson and Salaber (2013) I also run the three independent variables in separate regressions.

Table 6: *Pearson's correlation matrix*

The table reports the pairwise Pearson's correlation coefficients between the variables. All variables are defined in table 1. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level.

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	SERVICES	1							
(2)	TEXTECH	0.138*	1						
(3)	TDEVELOPED	0.262***	0.609***	1					
(4)	PACQ	0.159**	0.210***	0.387***	1				
(5)	RELATEDNESS	0.274***	0.038	0.025	-0.023	1			
(6)	SIZE	0.009	-0.030	-0.139*	-0.102	-0.065	1		
(7)	TASIAN	-0.170**	-0.016	-0.369***	-0.135*	0.019	0.001	1	
(8)	TLISTED	-0.003	-0.105	-0.123	-0.125	0.027	0.124	0.214***	1

4.3 Regression results

Model 1, in tables 7 to 9, shows the effect of the independent variable(s) on the dependent variable without adjusting for the control variables. In the Models 2 until 6 one different control variable has been included per model in addition to the independent variable(s). Furthermore, model 7 shows the results of the full regression model. Models 8 and beyond exclude one or multiple control variable(s) to check if collinearity has an impact on the results. As collinearity increases, the unique variance explained by each independent variable decreases (Hair et al., 2014). In each regression model the sample size is 166. Regarding the impact of the control variables, PACQ has a positive impact on the abnormal returns in a few regression models, while the impact of SIZE and TASIAN is negative across the different regressions in tables 7 until 10. A general note is that the adjusted R^2 is low across the different regressions, this means that the independent and control variables explain the dependent variable (CAR) for a relatively small part. Nicholson and Salaber (2013) had R^2 values comparable to the ones in this thesis, while Gubbi et al. (2010) and Kohli and Mann (2012) had slightly higher values.

4.3.1 Results hypothesis 2a: Impact of bidder active in the service sector

In table 7 the results of the regressions are shown in which CAR (-1,1), calculated with the market-adjusted return model, is the dependent variable and the dummy variable service sector acquirer (SERVICES) is the independent variable. All twelve models show insignificant coefficients for the dummy variable service sector acquiring firm. Excluding the outliers instead of winsorizing them did not lead to significant results either. With CAR (0,2) MM as dependent variable, the SERVICES variable had a positive coefficient in multiple regression models (see

appendix B). With CAR (-5,-1) MAR and CAR (-5,-1) MM the SERVICES variable had a negatively significant coefficient. With the other tested dependent variables, namely CAR (-1,1) MM, and CAR (0,2) MAR, the SERVICES variable was insignificant in the regression models. These results provide no support for hypothesis 2a: "Among cross-border M&A announcements by Indian firms, those that involve bidding firms that operate in the service sector will generate greater abnormal returns". This is in contrast to the positive impact found by Nicholson and Salaber (2013). They used CAR (-3,1) MAR as the dependent variable.

4.3.2 Results hypothesis 2b: Impact of level of high-technology exports in host country

Table 8 shows the results of the regression models in which CAR (-1,1) MAR is the dependent variable and the level of high-technology exports in the host country (TEXTECH) is the independent variable. The level of high-technology exports is insignificant in explaining the CARs. Excluding the outliers instead of winsorizing them did not change the conclusions. Testing with five other dependent variables also results in insignificance of this independent variable (see appendix B). Stock investors do not recognize technology, one of the strategic assets that might be sought, in the target country as value-enhancing for the Indian acquirers. The stock market does not react significantly different to cross-border M&A announcements targeting countries with a high level of high-technology exports. Thus, this thesis does not give support for hypothesis 2b: "Among cross-border M&As by Indian firms, bidders' abnormal returns are positively associated with the level of technology exports in the host country".

4.3.3 Results hypothesis 2c: Impact of target located in developed country

Table 9 shows the results of the regression models, in which CAR (-1,1), calculated with the market-adjusted return model, is the dependent variable and the dummy target located in a developed country (TDEVELOPED) is the independent variable. Models 1, 3, 4, 6, 8, and 9 show a significant, positive coefficient for the dummy variable target located in a developed country, but when the proportion acquired (PACQ) or the dummy variable target located in an Asian country (TASIAN) is considered the significance is no longer present. The absence of significance could be caused by collinearity. Excluding the outliers instead of winsorizing them, leads to insignificance of the dummy variable target located in a developed country in models 4 and 9, while the significance remains present in models 1, 3, 6, and 8.

Regression results with CAR (-1,1) MM, CAR (-5,-1) MAR, CAR (-5,-1) MM, and CAR (0,2) MAR as dependent variable all show insignificant coefficients for the dummy variable target located in a developed country (see appendix B). CAR (0,2) MM shows significance for this variable in models 1 and 3 only. To sum up, based on models 1, 3, 4, 6, 8, and 9 of table 9 there is support for hypothesis 2c: ”Among cross-border M&A announcements by Indian firms, those that involve target firms in developed countries will generate greater abnormal returns for the bidders”. This is in line with Nicholson and Salaber and Gubbi et al. (2010). Nicholson and Salaber (2013) used CAR (-3,1) MAR and Gubbi et al. (2010) used CAR (0) MM as the dependent variable.

4.3.4 Results hypotheses 2a, 2b, and 2c

Table 10 presents the results of the regression models in which CAR (-1,1), calculated with the market model, is the dependent variable and all three independent variables are included. Most models do not show significant coefficients of the three independent variables, only the dummy variable target located in a developed country (TDEVELOPED) is significant in models 1, 3, 6, and 11. Excluding the outliers instead of winsorizing them, does not change the significance level of the dummy variable target located in a developed country. With all five other tested dependent variables all three explanatory variable were insignificant. Thus, based on models 1, 3, 6, and 11 of table 10 there is support for hypothesis 2c: ”Among cross-border M&A announcements by Indian firms, those that involve target firms in developed countries will generate greater abnormal returns for the bidders”. The coefficients of the other two explanatory variables are insignificant, i.e., there is not enough evidence to support hypotheses 2a and 2b.

Table 7: *Regression cumulative abnormal returns on dummy variable service sector bidder*

The dependent variable is CAR (-1,1) MAR in all twelve regression models. All variables are defined in table 1. The table reports unstandardized coefficients and t-statistics (in parentheses). N = 166. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level.

	Regression model											
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	0.010**	-0.035	0.006	0.048***	0.014***	0.010**	0.008	0.047***	0.052***	0.015	0.042**	0.008
	(2.111)	(-1.541)	(0.950)	(3.072)	(2.866)	(2.194)	(0.259)	(3.004)	(3.329)	(0.539)	(2.587)	(0.260)
SERVICES	0.010	0.006	0.006	0.009	0.006	0.009	0.001	0.009	0.006	0.004	0.007	0.001
	(1.118)	(0.795)	(0.766)	(1.160)	(0.724)	(1.115)	(0.147)	(1.155)	(0.761)	(0.534)	(0.837)	(0.148)
PACQ		0.049**					0.040			0.028		0.040
		(2.011)					(1.627)			(1.541)		(1.636)
RELATEDNESS			0.009				0.010				0.008	0.010
			(1.129)				(1.265)				(0.991)	(1.269)
SIZE				-0.005**			-0.005**	-0.005**	-0.005**	-0.005**	-0.005**	-0.005**
				(-2.556)			(-2.296)	(-2.459)	(-2.544)	(-2.400)	(-2.378)	(-2.316)
TASIAN					-0.026**		-0.025**		-0.025**	-0.024**		-0.024**
					(-2.302)		(-2.188)		(-2.252)	(-2.115)		(-2.237)
TLISTED						-0.025	-0.001	-0.016	-0.003	0.002	-0.018	
						(-0.885)	(0.032)	(-0.587)	(-0.090)	(0.053)	(-0.625)	
Adj. R^2	0.002	0.020	0.003	0.034	0.027	0.000	0.065	0.030	0.054	0.062	0.030	0.071
F-statistic	1.250	2.658	1.274	3.913	3.290	1.015	2.927	2.713	3.353	3.180	2.280	3.534

Table 8: *Regression cumulative abnormal returns on level of high-technology exports in host country*

The dependent variable is *CAR (-1,1)* MAR in all eleven regression models. All variables are defined in table 1. The table reports unstandardized coefficients and t-statistics (in parentheses). N = 166. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level.

	Regression model										
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Intercept	0.004	-0.038	-0.002	0.042**	0.008	0.005	0.005	0.040*	0.036	0.040*	-0.005
	(0.267)	(-1.562)	(-0.109)	(2.075)	(0.568)	(0.377)	(0.179)	(1.947)	(1.737)	(1.955)	(-0.157)
TEXTECH	0.003	0.001	0.003	0.003	0.003	0.003	0.001	0.003	0.003	0.003	0.001
	(0.699)	(0.258)	(0.649)	(0.635)	(0.671)	(0.609)	(0.219)	(0.550)	(0.527)	(0.559)	(0.185)
PACQ		0.051**					0.039				0.047*
		(2.058)					(1.592)				(1.898)
RELATEDNESS			0.010				0.010	0.010	0.009	0.010	0.010
			(1.367)				(1.354)	(1.296)	(1.248)	(1.299)	(1.309)
SIZE				-0.005**			-0.005**	-0.005**	-0.004**	-0.005**	-0.005**
				(-2.518)			(-2.293)	(-2.439)	(-2.027)	(-2.473)	(-2.254)
TASIAN					-0.027**		-0.025**	-0.027**		-0.027**	
					(-2.449)		(-2.250)	(-2.443)		(-2.520)	
TLISTED						-0.023	0.002	-0.001	-0.016		
						(-0.817)	(0.056)	(-0.050)	(-0.578)		
Adj. R^2	-0.003	0.016	0.002	0.029	0.027	-0.005	0.066	0.057	0.028	0.063	0.047
F-statistic	0.489	2.367	1.180	3.423	3.252	0.577	2.932	2.982	2.169	3.750	3.028

Table 9: *Regression cumulative abnormal returns on dummy variable target located in a developed country*

The dependent variable is CAR (-1,1) MAR in all twelve regression models. All variables are defined in table 1. The table reports unstandardized coefficients and t-statistics (in parentheses). N = 166. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level.

	Regression model											
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	0.000	-0.032	-0.006	0.036**	0.007	0.001	0.007	-0.005	0.030	0.040	-0.002	0.039
	(-0.006)	(-1.407)	(-0.674)	(2.085)	(0.883)	(0.106)	(0.241)	(-0.572)	(1.641)	(2.133)	(-0.060)	(2.112)
TDEVELOPED	0.018**	0.012	0.017**	0.015*	0.011	0.017**	0.003	0.017*	0.014*	0.008	0.010	0.008
	(2.076)	(1.348)	(2.046)	(1.765)	(1.269)	(1.977)	(0.304)	(1.942)	(1.683)	(0.883)	(1.049)	(0.877)
PACQ		0.039					0.038				0.036	
		(1.481)					(1.453)				(1.395)	
RELATEDNESS			0.010				0.010	0.010	0.009	0.010	0.010	0.010
			(1.356)				(1.353)	(1.375)	(1.245)	(1.299)	(1.298)	(1.297)
SIZE				-0.005**			-0.005**		-0.004**	-0.005**	-0.004**	-0.005**
				(-2.290)			(-2.242)		(-2.143)	(-2.336)	(-2.081)	(-2.302)
TASIAN					-0.021*		-0.024**			-0.023**		-0.023**
					(-1.826)		(-2.003)			(-2.021)		(-1.964)
TLISTED						-0.018	0.001	-0.019	-0.013		0.010	-0.002
						(-0.644)	(0.038)	(-0.688)	(-0.454)		(-0.346)	(-0.080)
Adj. R^2	0.020	0.027	0.025	0.044	0.033	0.016	0.066	0.021	0.066	0.065	0.048	0.059
F-statitstic	4.309	3.266	3.086	4.832	3.853	2.354	2.940	2.208	2.841	3.878	2.675	3.084

Table 10: *Regression cumulative abnormal returns on three independent variables*

The dependent variable is CAR (-1,1) MAR in all twelve regression models. All variables are defined in table 1. The table reports unstandardized coefficients and t-statistics (in parentheses). N = 166. * Significance at 10% level. ** Significance at 5% level. *** Significance at 1% level.

	Regression model											
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	0.007	-0.024	0.003	0.042**	0.009	0.008	0.007	0.036*	0.040*	0.007	0.004	0.042**
	(0.526)	(-0.926)	(0.200)	(2.043)	(0.634)	(0.605)	(0.222)	(1.736)	(1.905)	(0.225)	(0.278)	(2.038)
SERVICES	0.005	0.004	0.002	0.006	0.004	0.005	0.001	0.003	0.002	0.001	0.002	0.006
	(0.584)	(0.495)	(0.212)	(0.704)	(0.458)	(0.604)	(0.093)	(0.373)	(0.214)	(0.094)	(0.227)	(0.713)
TEXTECH	-0.004	-0.004	-0.005	-0.003	-0.001	-0.004	0.000	-0.004	0.000	0.000	-0.005	-0.003
	(-0.683)	(-0.637)	(-0.731)	(-0.529)	(-0.194)	(-0.707)	(0.035)	(-0.597)	(-0.026)	(0.031)	(-0.757)	(-0.548)
TDEVELOPED	0.021*	0.015	0.021*	0.017	0.012	0.020*	0.002	0.017	0.008	0.003	0.021*	0.016
	(1.881)	(1.345)	(1.959)	(1.519)	(0.994)	(1.817)	(0.196)	(1.562)	(0.630)	(0.199)	(1.894)	(1.485)
PACQ		0.037					0.037			0.037		
		(1.416)					(1.431)			(1.438)		
RELATEDNESS			0.010				0.010	0.009	0.009	0.010	0.010	
			(1.258)				(1.260)	(1.103)	(1.175)	(1.265)	(1.273)	
SIZE				-0.005**			-0.005**	-0.004**	-0.005**	-0.005**		-0.005**
				(-2.270)			(-2.221)	(-2.101)	(-2.281)	(-2.241)		(-2.201)
TASIAN					-0.020		-0.024*		-0.023*	-0.024*		
					(-1.646)		(-1.891)		(-1.826)	(-1.934)		
TLISTED						-0.019	0.001	-0.014	-0.003		-0.020	-0.013
						(-0.687)	(0.037)	(-0.486)	(-0.089)		-0.719	-0.448
Adj. R^2	0.013	0.019	0.016	0.037	0.023	0.009	0.054	0.034	0.048	0.060	0.013	0.032
F-statistic	1.703	1.787	1.677	2.598	1.968	1.391	2.179	1.962	2.183	2.505	1.441	2.108

5. Conclusion and Limitations

5.1 Conclusion

M&As have become a hot topic, partly because the total value of M&As per year has increased globally. Firms from emerging markets have increasingly used cross-border mergers and acquisitions during the last decades (Deng & Yang, 2015). While M&As can be motivated by several value-increasing and value-decreasing factors (Weitzel and McCarthy, 2011), several emerging market studies argue that acquiring firms from emerging markets, like India, are mainly motivated by the strategic asset seeking motive (Athreye & Kapur, 2009; Luo & Tung, 2007). According to asset seeking perspective, firms can acquire a foreign firm to access strategic assets, which can lead to increased performance.

This makes it interesting to examine M&A performance and the impact of the strategic asset seeking motive. This thesis aims to clarify, how the strategic asset seeking motive affects short-term M&A stock performance of Indian acquirers. Therefore, the following two research questions are formulated:

1. *What is the short-term stock market reaction to cross-border M&A announcements by Indian firms?*
2. *What is the impact of the strategic asset seeking motive on the short-term stock market reaction to cross-border M&A announcements by Indian firms?*

Previous cross-border M&A studies that focused on announcement returns of Indian acquirers show positive abnormal return (Gubbi et al., 2010; Kohli & Mann, 2012; Nicholson & Salaber 2013). However, there is value in revisiting these findings with more current data. In addition, only two of them studied the impact of the asset seeking motive (Gubbi et al., 2010; Nicholson & Salaber 2013). Because of several developments, thorough study of this question, using more recent data is warranted.

To address these research questions, this thesis is built on the synergy, internalization, and resource-based theory. According to hypothesis 1, the announcement of a cross-border M&A by an Indian firm leads to a significant positive stock market reaction. According to hypotheses 2a, 2b, and 2c, Indian firms gain higher short-term abnormal returns when the main M&A motive is to get access to strategic assets. To answer research question 2 three proxies for the asset seeking motive are used, namely the acquirer being mainly active in the services sector

(SERVICES; H2a), the level of technology export in the host country (TEXTECH; H2b), and the target being located in a developed country (TDEVELOPED; H2c). In addition, several control variables are considered.

To test hypothesis 1 the event study methodology has been used, more specifically the market model and the market-adjusted return model. To test the significance, t-tests and WSR tests are performed for several event windows. To test hypotheses 2a, 2b, and 2c, OLS regression analyses have been performed. The event windows (-5,-1), (-1,1) and (0,2) using both the market model and the market-adjusted return model are used as the dependent variables in the regressions. The proxies SERVICES, TEXTECH, and TDEVELOPED each are used as independent variables in separate regression models as an independent variable.

The results provide strong support for hypothesis 1: "The announcement of a cross-border M&A by Indian firms leads to a significant positive stock market reaction". Using both the market and market-adjusted return model, most mean and median CARs in the event windows around and after announcements, in contrast to the pre- announcement event windows, are statistically significantly higher than zero at the 10% significance level. The exceptions are the mean and median MM (5,5) and the median MM (0,5).

Regarding the impact of the strategic asset seeking motive, the results are mixed. The data does provide support for hypothesis 2c: "Among cross-border M&A announcements by Indian firms, those that involve target firms in developed countries will generate greater abnormal returns for the bidders". In contrast, the data does not support hypothesis 2a: "Among cross-border M&A announcements by Indian firms, those that involve bidding firms that operate in the service sector will generate greater abnormal returns". There is no support either, for hypothesis 2b: "Among cross-border M&As by Indian firms, bidders' abnormal returns are positively associated with the level of technology exports in the host country".

This means that the results regarding hypothesis 1 are in line with the literature and previous empirical studies (Gubbi et al., 2010; Kohli & Mann, 2012; Nicholson & Salaber, 2013). The positive impact of targeting firms located in developed countries (H2c) found in this thesis is also found by other studies (Gubbi et al., 2010; Nicholson & Salaber, 2013). However, I find no support for the positive impact of the dummy variable service sector (H2a). Nicholson and Salaber (2013) did find statistically significant support for this service variable in their

regression results.

Multiple factors could explain the different results compared to earlier studies. Examples might include the increased GDP in India (IMF, n.d.), the changed sectors of the targets (Prahalathan et al., 2014), and the changed size of the targets (Pradhan, 2017). In addition, the changed economic climate in the target countries as a consequence of the aftermath of the 2008 financial crisis could influence the stock market reactions. Beltratti and Paladino (2013) argue that if a risky cross border M&A deal is announced during crisis time, it may be interpreted as a signal of wealth. It indicates that the acquiring firm has financial strength and exploits the benefits of acquiring firms for low prices during crisis times. These M&As are riskier during crisis times, because demand in foreign markets is likely relatively low and the competition may become more severe, as firms are trying their best to survive.

The thesis makes several contributions to the academic literature. Firstly, it confirms that targeting a developed country does lead to significantly higher stock market reactions for acquiring firms using more recent data, compared to earlier studies. Secondly, prior studies did not specifically consider technology to assess the impact of the strategic asset seeking motive. The results of this thesis fail to support a significant impact of the level of high-technology in the host country on stock market reactions to cross-border M&A announcements. Thirdly, the data does not provide support for a significantly different stock market reaction for service sector acquirers, which have a competitive advantage. Fourthly, the mean and median stock market-reaction to cross-border M&A announcements made by Indian firms in recent years are positive.

The following management contributions are found. Managers of Indian firms can expect higher stock market reactions when targeting firms located in developed countries. This is important information, because shareholders can decide upon completion of M&A deals. However, I did not find higher abnormal returns for service sector bidders, which indicates that stock holders do not recognize the possibility of higher gains for service sector acquirers. I did not find an impact when targeting countries with a high level of high-technology exports either. However, the mean and median stock market reactions to cross-border M&A announcements were significantly positive. This means that the management of potential acquirers should be cautious when they are not targeting a developed country. It seems like being a service acquirer

with a competitive advantage and the level of technology in the host country, indicating the strategic asset seeking motive, are not enough for investors to react more positively.

5.2 Limitations

This thesis is subject to certain limitations. First of all, the models for normal returns can bias the outcomes regarding abnormal returns. Fama (1998, p. 291) states that "The problem is that all models for expected returns are incomplete descriptions of the systematic patterns in average returns during any sample period." It is very difficult to estimate normal returns, which leads to imprecise abnormal return calculations. Biased abnormal returns can distort the regression results, leading to biased conclusions. It is noteworthy, that I checked for confounding events during the event windows, but confounding events during the estimation period could also distort abnormal return calculations with the market model. This could have biased the univariate CARs based on the market model. In addition, the market-adjusted return model might be too simplistic for normal returns calculations (Nicholson & Salaber, 2013). Furthermore, in this thesis I assume that at least the semi-strong form of the efficient market hypothesis holds. This means that stock prices reflect all publicly available information (Malkiel & Fama, 1970).

In addition, the reader should be cautious generalizing the multiple linear regression results from this thesis. The reason is that there is some heteroscedasticity. Although OLS regression analysis has been shown to be quite robust (Hair et al., 2014), WLS regressions could solve this issue in future studies. The assumptions of linearity, and independence of the residuals are met (Hair et al., 2014). Besides, while considering the assumptions of normal distributions and the absence of outliers, still some deviations from these assumptions are present in the data. Furthermore, it has to be considered that this thesis, since it uses stock performance, only considers Indian firms that are listed on the stock exchange. On top of that, the level of high-technology exports in the host country does not provide information about the level of technology at the target firms, which would be more interesting. In addition, this variable only takes R&D intensity into consideration, but knowhow and patents are also important dimensions. Other technology-related proxies might give different results. Besides, since the adjusted R^2 values in this thesis and in other Indian M&A studies are quite low, future studies could consider other factors that might explain M&A announcement returns and incorporate them as control variables. In this way, the explaining value of the model can be increased.

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Appendices

Appendix A: Unwinsorized CARs around M&A announcements

Unwinsorized CARs around M&A announcements

	Mean	Median	Std. Deviation	Minimum	Maximum	% Positive returns
MAR (-5,-1)	0.005	0.004	0.057	-0.183	0.211	53.614%
MM (-5,-1)	0.000	-0.002	0.057	-0.202	0.252	47.590%
MAR (-2,-1)	0.001	-0.002	0.043	-0.200	0.142	46.988%
MM (-2,-1)	0.000	-0.001	0.042	-0.226	0.122	48.193%
MAR (-1,1)	0.012	0.007	0.052	-0.170	0.205	59.639%
MM (-1,1)	0.010	0.003	0.050	-0.179	0.199	57.229%
MAR (-2,2)	0.014	0.007	0.066	-0.139	0.270	57.229%
MM (-2,2)	0.009	0.006	0.061	-0.143	0.285	53.012%
MAR (-5,5)	0.019	0.019	0.088	-0.305	0.401	65.663%
MM (-5,5)	0.007	0.009	0.087	-0.297	0.384	57.831%
MAR (0,1)	0.012	0.007	0.046	-0.132	0.168	59.639%
MM (0,1)	0.010	0.004	0.045	-0.141	0.174	59.639%
MAR (0,2)	0.003	0.005	0.025	-0.128	0.087	65.663%
MM (0,2)	0.013	0.004	0.055	-0.144	0.198	56.627%
MAR (0,5)	0.014	0.009	0.077	-0.270	0.376	56.627%
MM (0,5)	0.007	0.006	0.078	-0.251	0.399	53.614%

Note. *N = 166*.

Appendix B: Other regression results

Dummy variable bidder active in the service sector as independent variable (H2a)

Regression CAR (-5,1) market-adjusted return and SERVICES

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.011	2.153	-0.001	-0.057	0.011	1.654	0.029	1.716	0.014	2.538	0.011	2.131	0.025	0.779	0.029	1.719	0.033	1.916	0.026	0.815	0.030	1.652	0.035	1.202
SERVICES	-0.019	-2.186	-0.019	-2.233	-0.019	-2.107	-0.019	-2.177	-0.021	-2.401	-0.019	-2.179	-0.021	-2.318	-0.019	-2.170	-0.021	-2.401	-0.021	-2.409	-0.018	-2.067	-0.002	-0.209
PACQ			0.000	0.500									0.000	0.278					0.000	0.275			0.000	-0.321
RELATEDNESS					0.000	0.042							0.001	0.068							0.000	-0.044	0.001	0.161
SIZE							-0.003	-1.135					-0.003	-1.137	-0.003	-1.144	-0.003	-1.184	-0.003	-1.150	-0.003	-1.140	-0.003	-1.263
TASIAN									-0.017	-1.409			-0.018	-1.437			-0.018	-1.475	-0.018	-1.440			-0.009	-0.887
TLISTED											0.001	0.022	0.016	0.500	0.005	0.163	0.015	0.481	0.016	0.503	0.005	0.164		
Adj. R^2	0.022		0.018		0.016		0.024		0.028		0.016		0.014		0.018		0.025		0.020		0.012		0.018	
F-statistic	4.778		2.503		2.376		3.038		3.396		2.375		1.378		2.022		2.071		1.663		1.508		0.478	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-5,1) market model and SERVICES

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.006	1.284	0.000	0.006	0.008	1.242	0.019	1.103	0.009	1.608	0.006	1.243	0.022	0.668	0.019	1.128	0.022	1.286	0.019	0.605	0.021	1.208	0.022	0.677
SERVICES	-0.020	-2.435	-0.021	-2.438	-0.020	-2.230	-0.020	-2.425	-0.022	-2.586	-0.020	-2.427	-0.021	-2.348	-0.020	-2.417	-0.022	-2.590	-0.022	-2.572	-0.019	-2.192	-0.021	-2.33
PACQ			0.007	0.257									0.002	0.089					0.003	0.115			0.001	0.032
RELATEDNESS					-0.003	-0.385							-0.003	-0.370							-0.004	-0.452	-0.003	-0.36
SIZE							-0.002	-0.762					-0.002	-0.837	-0.002	-0.799	-0.002	-0.829	-0.002	-0.812	-0.002	-0.828	-0.002	-0.77
TASIAN									-0.013	-1.090			-0.014	-1.147			-0.015	-1.192	-0.014	-1.173			-0.013	-1.042
TLISTED											0.008	0.268	0.020	0.627	0.011	0.365	0.019	0.616	0.019	0.622	0.012	0.381		
Adj. R^2	0.029		0.023		0.024		0.027		0.030		0.023		0.120		0.021		0.024		0.018		0.160		0.016	
F-statistic	5.929		2.980		3.023		3.247		3.561		2.984		1.348		2.197		2.008		1.599		1.691		1.545	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-1,1) market model return and SERVICES

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.008	1.753	-0.030	-1.350	0.004	0.634	0.040	2.656	0.012	2.457	0.008	1.836	0.006	0.199	0.039	2.590	0.044	0.015	0.013	0.488	0.034	2.169	0.001	0.062
SERVICES	0.008	1.078	0.006	0.795	0.006	0.712	0.008	1.112	0.005	0.713	0.008	1.075	0.001	0.150	0.008	1.107	0.006	0.008	0.004	0.551	0.006	0.770	-0.004	-0.553
PACQ			0.042	1.741									0.033	1.393					0.031	1.303			0.033	1.084
RELATEDNESS					0.009	1.189							0.010	1.310							0.008	1.069	0.001	0.166
SIZE							-0.004	-2.235					-0.004	-1.978	-0.004	-2.140	-0.004	0.002	-0.004	-2.084	-0.004	-2.055	-0.002	-0.843
TASIAN									-0.023	-2.118			-0.022	-2.006			-0.022	0.011	-0.021	-1.930			-0.016	-1.840
TLISTED											-0.023	-0.857	-0.001	-0.042	-0.016	-0.596	-0.004	0.027	-0.001	-0.019	-0.017	-0.637		
Adj. R^2	0.001		0.013		0.003		0.025		0.022		-0.001		0.048		0.021		0.040		0.044		0.022		0.006	
F-statistic	1.163		2.104		1.289		3.093		2.836		0.948		2.394		2.172		2.711		2.518		1.916		1.154	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market-adjusted returns and SERVICES

	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.003	1.463	-0.005	-0.498	0.001	0.332	0.000	-0.044	0.003	1.370	0.003	1.355	-0.015	-1.036	0.000	0.028	0.000	0.063	-0.010	-0.754	-0.003	-0.354	-0.014	-1.026
SERVICES	0.000	0.082	0.000	-0.048	-0.001	-0.281	0.000	0.077	0.000	0.069	0.000	0.084	-0.002	-0.501	0.000	0.080	0.000	0.035	0.000	-0.102	-0.001	-0.285	-0.002	-0.465
PACQ			0.009	0.809									0.012	1.039					0.011	0.943			0.011	0.959
RELATEDNESS					0.005	1.309							0.005	-1.396							0.005	1.312	0.005	1.413
SIZE							0.000	-0.492					0.001	0.575	0.000	0.385	0.000	0.378	0.000	0.464	0.000	0.483	0.001	0.688
TASIAN									0.000	-0.068			-0.001	-0.250			-0.001	-0.255	-0.001	-0.170			0.000	-0.061
TLISTED											0.012	0.884	0.013	0.357	0.011	0.827	0.012	0.861	0.013	0.944	0.010	0.778		
Adj. R^2	-0.006		-0.008		-0.002		-0.011		-0.012		-0.007		-0.013		-0.013		-0.019		-0.019		-0.008		-0.012	
F-statistic	0.007		0.330		0.860		0.124		0.006		0.394		0.640		0.311		0.248		0.376		0.644		0.598	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market model and SERVICES

	1		2		3		4		5		6		7		8		9		10		11		12	
Intercept	0.007	1.330	-0.024	(-0.973)	0.004	-0.590	0.030	1.757	0.009	1.560	0.007	1.369	-0.001	-0.029	0.030	1.721	0.032	1.818	0.004	0.136	0.026	1.460	-0.001	-0.029
SERVICES	0.017	2.015	0.016	1.792	0.016	1.737	0.017	2.034	0.016	1.837	0.017	2.009	0.013	1.392	0.017	2.028	0.016	1.853	0.015	1.686	0.016	1.770	0.013	1.397
PACQ			0.034	1.267									0.030	1.075					0.028	1.026			0.030	1.084
RELATEDNESS					0.006	0.722							0.007	0.760							0.005	0.634	0.007	0.762
SIZE							-0.003	-1.430					-0.003	-1.230	-0.003	-1.379	-0.003	-1.398	-0.003	-1.296	-0.003	-1.326	-0.003	-1.244
TASIAN									-0.011	-0.864			-0.010	-0.765			-0.010	-0.818	-0.009	-0.724			-0.010	-0.788
TLISTED											-0.014	-0.458	-0.001	-0.017	-0.009	-0.285	-0.003	-0.100	0.000	-0.004	-0.010	-0.309		
Adj. R^2	0.018		0.022		0.015		0.024		0.017		0.013		0.015		0.019		0.017		0.017		0.015		0.021	
F-statistic	4.061		2.840		2.285		3.065		2.401		2.125		1.408		2.059		1.708		1.578		1.639		1.700	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-5,1) market-adjusted return and TEXTECH

	1		2		3		4		5		6		7		8		9		10		11	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.004	0.292	0.001	0.038	0.007	0.429	0.024	1.050	0.006	0.412	0.004	0.285	0.031	0.913	0.029	1.239	0.027	1.161	0.029	1.232	0.027	0.791
TEXTECH	0.000	0.000	0.000	-0.031	0.000	0.021	0.000	-0.034	0.000	-0.015	0.000	0.003	0.000	0.033	0.000	0.015	0.000	0.009	0.000	-0.027	0.000	-0.014
PACQ			0.004	0.149									-0.003	-0.092							0.000	0.013
RELATEDNESS					-0.005	-0.551							-0.005	-0.620	-0.005	-0.619	-0.005	-0.631	-0.005	-0.606	-0.005	-0.623
SIZE							-0.003	-1.139					-0.003	-1.212	-0.003	-1.212	-0.003	-1.186	-0.003	-1.173	-0.003	-1.164
TASIAN									-0.012	-0.998			-0.013	-1.046	-0.013	-1.046			-0.012	-0.983		
TLISTED											0.001	0.028	0.013	0.403	0.013	0.411	0.006	0.192				
Adj. R^2	-0.006		-0.012		-0.010		-0.004		-0.006		-0.012		-0.020		-0.013		-0.014		-0.008		-0.014	
F-statistic	0.000		0.011		0.152		0.649		0.498		0.000		0.466		0.561		0.428		0.663		0.419	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-5,1) market model and TEXTECH

Model	1		2		3		4		5		6		7		8		9		10		11	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	-0.005	-0.346	-0.001	-0.026	-0.001	-0.055	0.008	0.346	-0.004	-0.264	-0.006	-0.384	0.024	0.700	0.015	0.639	0.013	0.585	0.014	0.625	0.021	0.630
TEXTECH	0.002	0.310	0.002	0.344	0.002	0.349	0.002	0.287	0.002	0.299	0.002	0.340	0.002	0.437	0.002	0.373	0.002	0.369	0.002	0.315	0.002	0.384
PACQ			-0.005	-0.199									-0.010	-0.363							-0.009	-0.316
RELATEDNESS					-0.008	-1.034							-0.009	-1.096	-0.009	-1.088	-0.009	-1.098	-0.009	-1.069	-0.009	-1.092
SIZE							-0.002	-0.761					-0.002	-0.920	-0.002	-0.893	-0.002	-0.876	-0.002	-0.827	-0.002	-0.855
TASIAN									-0.008	-0.641			-0.010	-0.764	-0.009	-0.728			-0.007	-0.618		
TLISTED											0.009	0.305	0.018	0.561	0.019	0.588	0.014	0.443				
Adj. R^2	-0.006		-0.011		-0.005		-0.008		-0.009		-0.011		-0.021		-0.015		-0.012		-0.011		-0.013	
F-statistic	0.096		0.068		0.583		0.338		0.253		0.094		0.447		0.513		0.510		0.557		0.485	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-1,1) market model and TEXTECH

Model	1		2		3		4		5		6		7		8		9		10		11	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.006	0.484	-0.030	-1.274	0.001	0.084	0.039	1.984	0.010	0.763	0.008	0.593	0.006	0.211	0.037	1.821	0.033	1.634	0.037	1.831	-0.003	-0.103
TEXTECH	0.002	0.339	0.000	-0.056	0.001	0.286	0.001	0.277	0.001	0.307	0.001	0.250	-0.001	-0.113	0.001	0.179	0.001	0.164	0.001	0.195	-0.001	-0.134
PACQ			0.045	1.857									0.034	1.428	0.010	1.366					0.041	-1.720
RELATEDNESS					0.010	1.426							0.010	1.417			0.010	1.323	0.010	1.366	0.010	-1.374
SIZE							-0.004	-2.208					-0.004	-1.973	-0.004	-2.107	-0.004	-2.027	-0.004	-2.148	-0.004	-1.953
TASIAN									-0.024	-2.264			-0.022	-2.056	-0.024	-2.233			-0.024	-2.324		
TLISTED											-0.023	-0.827	-0.001	-0.046	-0.004	-0.141	-0.017	-0.626				
Adj. R^2	-0.005		0.009		0.001		0.018		0.019		-0.007		0.048		0.042		0.018		0.048		0.034	
F-statistic	0.115		1.782		1.074		2.495		2.623		0.399		2.392		2.447		1.768		3.072		2.437	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market-adjusted return and TEXTECH

Model	1		2		3		4		5		6		7		8		9		10		11	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.010	1.504	0.000	-0.042	0.007	1.096	0.006	0.638	0.010	1.500	0.009	1.380	-0.009	-0.640	0.003	0.341	0.003	0.322	0.003	0.324	-0.009	-0.620
TEXTECH	-0.002	-1.028	-0.003	-1.227	-0.002	-1.080	-0.002	-1.011	-0.002	-1.026	-0.002	-0.939	-0.003	-1.203	-0.002	-0.980	-0.002	-0.984	-0.002	-1.061	-0.003	-1.282
PACQ			0.012	1.055									0.014	1.199							0.014	1.159
RELATEDNESS					0.005	1.325							0.005	1.365	0.005	1.324	0.005	1.325	0.005	1.353	0.005	1.400
SIZE							0.000	0.464					0.001	0.563	0.000	0.454	0.000	0.462	0.001	0.549	0.001	0.665
TASIAN									-0.001	-0.097			-0.001	-0.133	-0.001	-0.276			-0.001	-0.125		
TLISTED											0.010	0.783	0.011	0.799	0.010	0.720	0.009	0.678				
Adj. R^2	0.000		0.001		0.005		-0.004		-0.006		-0.002		-0.006		-0.008		-0.003		-0.005		0.003	
F-statistic	1.057		1.085		1.409		0.634		0.530		0.834		0.844		0.723		0.890		0.542		1.115	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market model and TEXTECH

Model	1		2		3		4		5		6		7		8		9		10		11	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	-0.009	-0.605	-0.037	-1.395	-0.014	-0.902	0.014	0.624	-0.007	-0.458	-0.008	-0.555	-0.015	-0.456	0.010	0.445	0.008	0.355	0.010	0.445	-0.021	-0.614
TEXTECH	0.008	1.513	0.007	1.215	0.008	1.469	0.008	1.476	0.008	1.496	0.008	1.469	0.006	1.174	0.008	1.414	0.008	1.405	0.008	1.418	0.006	1.157
PACQ			0.035	1.273									0.029	1.044							0.033	1.191
RELATEDNESS					0.010	1.187							0.010	1.157	0.009	1.123	0.009	1.107	0.009	1.129	0.010	1.150
SIZE							-0.003	-1.358					-0.003	-1.178	-0.003	-1.279	-0.003	-1.249	-0.003	-1.285	-0.003	-1.161
TASIAN									-0.014	-1.167			-0.013	-1.046	-0.015	-1.176			-0.014	-1.192		
TLISTED											-0.009	-0.304	0.004	0.140	0.002	0.070	-0.006	-0.186				
Adj. R^2	0.008		0.011		0.010		0.013		0.010		0.002		0.011		0.011		0.008		0.017		0.017	
F-statistic	2.290		1.959		1.852		2.073		1.828		1.185		1.311		1.254		1.343		1.702		1.702	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Dummy variable target located in a developed country as independent variable (H2c)

Regression CAR (-5,1) market-adjusted return and TDEVELOPED

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.003	0.405	0.001	0.043	0.006	0.625	0.023	1.194	0.008	0.844	0.003	0.389	0.032	0.965	0.006	0.608	0.027	1.321	0.032	1.542	0.026	0.808	0.033	1.566
TDEVELOPED	0.002	0.165	0.001	0.118	0.002	0.179	0.000	0.007	-0.002	-0.218	0.002	0.169	-0.004	-0.353	0.002	0.185	0.000	0.039	-0.004	-0.376	0.000	0.029	-0.004	-0.362
PACQ			0.003	0.088									0.001	0.045							0.001	0.020		
RELATEDNESS					-0.005	-0.555							-0.005	-0.605	-0.005	-0.555	-0.005	-0.632	-0.005	-0.598	-0.005	-0.629	-0.005	-0.609
SIZE							-0.003	-1.127					-0.003	-1.245			-0.003	-1.173	-0.003	-1.216	-0.003	-1.167	-0.003	-1.252
TASIAN									-0.013	-1.008			-0.015	-1.104					-0.014	-1.053			-0.015	-1.107
TLISTED											0.002	0.049	0.013	0.402	0.002	0.066	0.006	0.195			0.006	0.195	0.013	0.401
Adj. R^2	-0.006		-0.012		-0.010		-0.004		-0.006		-0.012		-0.019		-0.016		-0.014		-0.007		-0.020		-0.013	
F-statistic	0.027		0.017		0.168		0.648		0.521		0.015		0.487		0.112		0.428		0.699		0.341		0.588	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-5,1) market model and TDEVELOPED

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	-0.001	-0.094	0.003	0.106	0.004	0.422	0.013	0.670	0.002	0.255	-0.001	-0.139	0.028	0.855	0.003	0.375	0.019	0.954	0.023	1.088	0.024	0.746	0.023	1.127
TDEVELOPED	0.000	0.005	0.001	0.060	0.000	0.031	-0.001	-0.103	-0.002	-0.251	0.000	0.039	-0.003	-0.239	0.001	0.068	0.000	-0.041	-0.003	-0.342	0.000	0.034	-0.003	-0.324
PACQ			-0.004	-0.142									-0.005	-0.176							-0.006	-0.195		
RELATEDNESS					-0.008	-1.022							-0.009	-1.067	-0.008	-1.028	-0.009	-1.083	-0.009	-1.050	-0.009	-1.086	-0.009	-1.065
SIZE							-0.002	-0.777					-0.002	-0.939			-0.002	-0.879	-0.002	-0.877	-0.002	-0.885	-0.002	-0.935
TASIAN									-0.009	-0.692			-0.010	-0.787					-0.009	-0.706			-0.010	-0.794
TLISTED											0.008	0.273	0.017	0.525	0.009	0.305	0.012	0.400			0.012	0.383	0.017	0.542
Adj. R^2	-0.006		-0.012		-0.006		-0.009		-0.009		-0.012		-0.021		-0.011		-0.013		-0.011		-0.019		-0.015	
F-statistic	0.000		0.010		0.522		0.740		0.240		0.037		0.424		0.337		0.476		0.691		0.386		0.506	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (-1,1) market model and TDEVELOPED

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.003	0.361	-0.029	-1.291	-0.003	-0.381	0.034	2.023	0.010	1.244	0.003	0.477	0.005	0.194	-0.002	-0.274	0.028	1.562	0.037	2.075	-0.003	-0.114	0.037	2.048
TDEVELOPED	0.011	1.350	0.006	0.676	0.011	1.318	0.009	1.065	0.005	0.562	0.010	1.251	-0.003	-0.335	0.010	1.214	0.008	0.979	0.002	0.204	0.003	0.391	0.002	0.198
PACQ			0.038	1.481									0.037	1.460							0.035	1.400		
RELATEDNESS					0.010	1.411							0.010	1.425	0.010	1.432	0.010	1.314	0.010	1.368	0.010	1.368	0.010	1.368
SIZE							-0.004	-2.055					-0.004	-1.999			-0.004	-1.898	-0.004	-2.101	-0.004	-1.836	-0.004	-2.060
TASIAN									-0.022	-1.903			-0.023	-2.051					-0.023	-2.083			-0.023	-2.011
TLISTED											-0.019	-0.701	-0.001	-0.036	-0.020	-0.747	-0.015	-0.538			-0.012	-0.429	-0.004	-0.154
Adj. R^2	0.005		0.012		0.011		0.024		0.021		0.002		0.049		0.008		0.024		0.048		0.030		0.042	
F-statistic	1.823		2.014		1.913		3.041		2.737		1.154		2.410		1.457		2.011		3.073		2.011		2.448	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market-adjusted return and TDEVELOPED

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.005	1.371	-0.006	-0.597	0.002	0.557	0.001	0.169	0.005	1.329	0.004	1.204	-0.014	-0.980	0.002	0.442	-0.002	-0.179	-0.001	-0.126	-0.015	-1.065	-0.001	-0.058
TDEVELOPED	-0.002	-0.479	-0.004	-0.861	-0.002	-0.512	-0.002	-0.413	-0.002	-0.546	-0.001	-0.372	-0.004	-0.892	-0.002	-0.409	-0.001	-0.352	-0.002	-0.511	-0.003	-0.781	-0.002	-0.485
PACQ			0.013	1.083									0.015	1.228							0.015	1.221		
RELATEDNESS					0.005	1.294							0.005	1.342	0.004	1.268	0.005	1.290	0.005	1.325	0.005	1.335	0.005	1.296
SIZE							0.000	0.431					0.000	0.449			0.000	0.428	0.000	0.496	0.000	0.485	0.000	0.393
TASIAN									-0.002	-0.276			-0.003	-0.465					-0.002	-0.290			-0.002	-0.437
TLISTED											0.011	0.832	0.012	0.904	0.011	0.794	0.010	0.739			0.011	0.833	0.011	0.807
Adj. R^2	-0.005		-0.004		-0.001		-0.010		-0.010		-0.007		-0.010		-0.003		-0.008		-0.011		-0.005		-0.013	
F-statistic	0.229		0.702		0.953		0.207		0.152		0.460		0.733		0.844		0.675		0.558		0.840		0.576	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively

Regression CAR (0,2) market model and TDEVELOPED

Model	1		2		3		4		5		6		7		8		9		10		11		12	
	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t	B	t
Intercept	0.001	0.142	-0.023	-0.891	-0.004	-0.469	0.022	1.135	0.004	0.421	0.001	0.184	-0.005	-0.159	-0.004	-0.423	0.016	0.766	0.019	0.927	-0.009	-0.268	0.019	0.918
TDEVELOPED	0.016	1.688	0.012	1.175	0.015	1.659	0.014	1.510	0.013	1.341	0.015	1.639	0.008	0.693	0.015	1.606	0.014	1.461	0.011	1.119	0.010	1.000	0.011	1.113
PACQ			0.029	0.986									0.028	0.972							0.028	0.957		
RELATEDNESS					0.010	1.203							0.010	1.181	0.010	1.208	0.009	1.135	0.010	1.150	0.010	1.168	0.010	1.147
SIZE							-0.003	-1.180					-0.002	-1.080			-0.002	-1.079	-0.003	-1.142	-0.002	-1.033	-0.003	-1.125
TASIAN									-0.008	-0.610			-0.009	-0.708					-0.009	-0.709			-0.009	-0.686
TLISTED											-0.008	-0.256	0.001	0.039	-0.009	-0.293	-0.005	-0.172			-0.003	-0.097	-0.001	-0.040
Adj. R^2	-0.006		-0.012		-0.006		-0.009		-0.009		-0.012		-0.021		-0.011		-0.013		-0.011		-0.019		-0.015	
F-statistic	0.000		0.010		0.522		0.302		0.240		0.037		0.424		0.377		0.476		0.561		0.386		0.506	

Note. N = 166. The table reports unstandardized coefficients and t-statistics; t-statistic of 1.654, 1.974, and 2.606 and higher is significant at the 10%, 5%, and 1% level, respectively