

# Acquirer return at cross-border acquisition announcement by emerging market companies: Observations from BRICS countries

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**Abstract**

Since the late 1990s and early 2000s, the world has witnessed a rapid growth of cross-border acquisitions conducted by emerging market acquirers. This thesis, inspired by several prior papers in the field, intends to analyse the acquirer return at the cross-border acquisition announcement from a group of emerging markets, namely Brazil, Russia, India, China, and South Africa (the BRICS countries). The main research goal of this thesis is to find out whether emerging market companies benefit from cross-border acquisitions in the form of stock return and what are the factors that influence the return.

The data used in this study covers cross-border acquisitions from the BRICS countries from January 1, 1995 to December 31, 2014. The data is retrieved from Thomson Financial Securities Data Company (SDC) and Thomson One systems. Using publicly listed acquiring company, sufficient stock price data, and single acquisition announcement by the same acquirer during the event window as the selection criteria, a full sample of 958 deals is obtained.

Event study methodology and cross-sectional regression analysis are used in the empirical tests. The event study is carried out using cumulative abnormal returns from event windows (-1, +1), (-3, +3), and (-5, +5). For the cross-sectional regression analysis, a total of 14 variables are introduced, which lead to a reduced subsample of 535 deals.

Event study results show that emerging market acquirers enjoys significant positive returns during 3-day event window when the target companies are from developed markets and when acquirers themselves don't have government ownership involvement. Natural resources relatedness gives mixed results: emerging market acquirers of non natural resources related deals enjoy significant positive returns from 3-day event window, while acquirers of natural resources related deals enjoy significant positive returns from 7-day and 11-day event windows.

Cross-sectional regression results show that relative deal size has significant positive influence on the acquirer return.

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**Keywords** cross-border acquisition, emerging market, BRICS, acquirer return, government ownership, natural resources, relative deal size

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**Työn nimi** Ostajayrityksen arvon muutos rajat ylittävien yritysostojen ilmoituksista kun ostajayritys kehittyviltä markkinoilta: Havaintoja BRICS-maista

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### Tiivistelmä

Kehittyvien markkinoiden yritykset ovat laajentaneet yritysostoja 1990-luvun loppupuoliskolta lähtien. Tämä työn inspiraatio ja perusta on aikaisempien tutkimusten ja journal-tason artikkeleiden johtopäätöksissä ja työssä lähden tarkastelemaan yritysostoja tehneiden yritysten markkina-arvojen muutosta ostoilmoituksesta eteenpäin. Yritykset on rajattu ns. BRICS-maihin (Brasilia, Venäjä, Intia, Kiina ja Etelä-Afrikka). Tutkimuksen tavoitteena on selvittää onko rajat ylittävistä yritysostoista hyötyä markkina-arvossa mitattuna ja mitkä ovat siihen vaikuttavat tekijät.

Tutkimuksen lähdemateriaalina on BRICS-maista suoritettut yritysostot vuoden 1995 alusta vuoden 2014 loppuun. Tiedot ovat peräisin Thomson Financial Securities Data Company:n ja Thomson One tietokannoista. Materiaalissa on julkisesti noteerattujen yritysten ilmoittamat yritysostot, edellyttäen että ostajan osakehinnan tiedot ovat riittävästi saatavilla. Otoksen koko rajautuu e.m. kriteereillä 958 tapahtumaan.

Empiirisessä testissä metodeina ovat tapahtuma-analyysi (event study) ja poikkileikkaus regressio (cross-sectional regression). Tapahtuma-analyysissä tarkastelen kumulatiivista epänormaalia tuottoa seuraavilla tapahtuma-ajoilla: (-1, +1), (-3, +3) ja (-5, +5). Regressiossa on 14 eri muuttujaa, joiden pohjalta käytettävissä oleva otos on 535 yritysostoa.

Tapahtuma-analyysin perusteella kehittyvien markkinoiden ostajat saavat huomattavan positiivisen hyödyn kun tapahtuma-aika on 3 päivää, ostettu yritys on kehittyneeltä markkinalta ja ostajalla ei ole valtio-taustaista omistusta. Luonnonvara-sektorilla tulokset eivät ole yhtä selviä: osakkeiden arvossa mitattavat tuotto on tällä sektorilla merkittävää pidemmällä aikavälillä, 7 ja 11 päivällä, kun taas muilla aloilla merkittävä muutos positiivinen muutos on havaittavissa 3 päivän aikavälillä.

Regressio-analyysin perusteella oston suhteellinen koko vaikuttaa merkittävän positiivisesti ostajan markkina-arvoon.

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**Avainsanat** rajat ylittävät yrityskaupat, kehittyvät markkinat, BRICS, ostajan tuotto, kansallinen omistaja, luonnonvara resurssit, suhteellinen sopimuksen koko

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## **1. Introduction**

### *1.1. Background and motivation*

As one of the major methods used by companies to achieve international expansion, cross-border acquisitions have been widely studied. Extensive amount of papers have been written on the subject of analysing the impact of this activity to both the acquiring company and the target company, as well as the underlying reason for such impact. However, most of the studies have been focusing on the acquisitions conducted by developed market acquirers. It was not until the late 1990s and the beginning of the 2000s when the world started to witness a fast growing trend of both the number of deals and the deal size in cross-border acquisitions conducted by emerging market acquirers.

Compared to the developed market, emerging market originated acquisitions have their own characteristics and face different challenges. This new group of acquisitions have attracted attention from academia as well, more and more studies have been carried out to test various streams of hypotheses in an effort to explain the reasons and influence of the phenomenon. Majority of the existing studies focus on one specific emerging market, among the group, Chinese and Indian markets are getting the highest attention due to their market sizes and relatively high frequency of cross-border acquisition deals. Gubbi et al. (2010) study 425 cross-border acquisitions conducted by Indian companies from 2000 to 2007 and find significant positive abnormal returns. Ning et al. (2014) use 335 deals by Hong Kong Stock Exchange listed Chinese acquirers between 1991 and 2010 and show positive stock price reaction on average. There are limited amount of articles that provide a wider view of emerging markets and they give contradictory results. Aybar and Ficici (2009) examine 433 cross-border deals mainly from Asian countries between 1991 and 2004, and show value destruction in over half of the sample. Bhagat et al. (2011) test 698 acquisitions made by emerging market companies between 1991 and 2008 and find significant positive market response on the announcement day.

Due to such lack of evidence from multi-country studies, this thesis is designed with the intention to expand the existing limited findings and study the emerging market acquirers at an overall level.

This study employs sample data from five major emerging markets: Brazil, Russia, India, China, and South Africa (the BRICS countries), which represent a significant part of the emerging market. They also show a great variety of cultural and geographical diversity. Therefore, they are very representative of the overall emerging market. The data is retrieved from Thomson Financial Securities Data Company (SDC) and Thomson One systems, covering cross-border acquisitions during the time period from January 1, 1995 to December 31, 2014. Using various selection criteria, a full sample of 958 deals is obtained. The event study methodology and cross-sectional regression analysis are used in the empirical tests to answer a list of research questions regarding the parameters and predictors that can influence the acquirer return. The event study is carried out using cumulative abnormal returns from three sets of event windows: 3-day event window  $CAR(-1, +1)$ , 7-day event window  $CAR(-3, +3)$ , and 11-day event window  $CAR(-5, +5)$ . For the cross-sectional regression analysis, a list of variables are introduced, which leads to a reduced subsample of 535 deals.

## *1.2. Research question*

The main research goal of this thesis is to find out whether emerging market companies benefit from cross-border acquisitions in the form of stock return and what are the factors that can influence such return.

The synergy hypothesis (Bradley et al., 1988; Seth, 1990; Kogut and Zander, 1993) proposes that the value of the combined company will exceed the sum of the values of the individual companies. In addition, bootstrapping hypothesis (Khanna and Palepu, 2004; Martynova and Renneboog, 2008; Bhagat et al., 2011) suggest that the higher corporate governance standards of the target company is seen as an advantage. Combining these two theories, the first research question is introduced:

*Do emerging market acquirers enjoy higher return when they purchase target companies from developed countries?*

A second research question is formulated based on government ownership. Government ownership involvement in the acquiring firm poses various risks, such as principal-principal conflict, principal-agent conflict (Claessens et al., 2000, 2002; Ning et al., 2014). These

conflicts deteriorate investor's confidence in the company, which further affects their investment decisions. Deng and Yang (2015) argue that there is a strong presence of government ownership in those companies actively seeking natural resources. Therefore, these two characteristics are expected to have similar impact on acquirer return. Hence, the next research question:

*Do government ownership involvement and natural resources relatedness deteriorate emerging market acquirers' return?*

In addition, analysis is done on a list of predictors that might have some influence on the acquirer return to find out those that have significant correlations.

### *1.3. Main findings*

The event study results shows that, emerging market acquirers enjoys significant positive returns during 3-day event window when the target companies are from developed markets. This result is consistent with the findings from Gubbi et al. (2010). In addition, emerging market acquirers experience significant positive returns during 3-day event window when the acquirers themselves don't have government ownership involvement, which is in line with the results from Chen and Young (2010). Prior studies also suggest that there is a strong presence of government ownership in natural resources related industries (Deng and Yang, 2015), thus, it is expected that acquirers of non natural resources related deals benefit from positive return. However, natural resources relatedness gives mixed results: emerging market acquirers of non natural resources related deals enjoy significant positive returns from 3-day event window (observed from both full sample and subsample), while acquirers of natural resources related deals enjoy significant positive returns from 7-day and 11-day event windows (observed from full sample only). There is a lack of similar finding from prior studies, except that an earlier study by Nicholson and Salaber (2013) show that Chinese manufacturing companies benefit from positive returns when announcing natural resources related acquisitions.

Cross-sectional analysis is performed on the subsample of 535 cross-border acquisitions 14 variables. The dependent variable used is the cumulative abnormal return from 3-day event window  $CAR(-1, +1)$ . The results from cross-sectional regression analysis show varying correlations between different variables and acquirer return, however, only one of them has

statistical significance: relative deal size. Obtained through calculating the ratio of the acquisition transaction value to the acquirer's market capitalization, relative deal size positively influences the acquirer return. This result is consistent with the earlier study by Bhagat et al. (2011).

#### *1.4. Contributions and limitations*

This thesis provides some insight to the acquiring companies' stock performance at the cross-border acquisition announcements by emerging market acquirers. It contributes to the existing literature in such way that it provides an overall picture on the biggest emerging markets using a multi-country data sample instead of one single market. Two major parameters used in this thesis: government ownership involvement in the acquirer and the natural resources related acquisitions, have not been widely used in multi-country data analysis. Therefore, the multi-country results based on these parameters provide additional knowledge regarding emerging market acquirers' returns in general.

The results of this thesis also suffer from some limitations. The country selection of Brazil, Russia, India, China, and South Africa means that there are country specific characteristics which can impact the results. Some variables can have contradictory effects on deals from different countries, which means that the overall multi-country analysis results can be biased. In addition, the distribution of cross-border acquisitions are not even among the five selected countries, that is, the higher proportion one country has, the higher the influence of that one country to the final result. A possible solution to overcome these limitations is a comparative study. A high level comparative study of the five countries are performed and the results are discussed. Due to the lack of sample data from a few countries, however, it is not possible to carry out a more comprehensive comparison in this thesis.

#### *1.5. Structure*

This paper is divided into the following sections. Firstly, the literature review examines the analysis done by prior studies and sums up the key findings. Based on the literature review, the hypotheses used in this study is introduced and the rationale behind hypotheses selection

is explained. Following the literature review and hypotheses is the section on the sample data, including its selection, collection process, and the description of the data. Methodology section details the two methods used in the empirical tests: the event study method, and the cross-sectional analysis. The results from empirical tests are demonstrated and discussed in the results section. And finally the conclusion section wraps up this study.

## 2. Literature review and hypotheses

In this section, a series of existing literature in the field of cross-border acquisition study is reviewed. The main theories, perspectives, and hypotheses are summarized to provide an overview of the subject.

### 2.1. *Cross-border acquisitions in general*

Mergers and acquisitions, hereafter referred to as M&As, have been one of the most important corporate strategies and one of the most heavily studied corporate finance topics. Most traditionally, M&As involve two companies within the same country. While domestic M&As still account for majority of the total M&A deals, growing amount of deals are happening between two companies from two different countries, especially since the fifth merger wave that covers the period of 1993 to 2000 (Hitt et al., 2001). Although sharing a lot of similarities with domestic deals, cross-border acquisition<sup>1</sup> has a set of different characteristics due to the distinctive challenges it faces.

According to Shimizu et al. (2004), cross-border acquisitions are mainly used as:

- A mode of entry;
- A dynamic learning process;
- A value creating (or destroying) strategy.

Along with greenfield and joint venture, acquisition is one of the major equity-based mode of entry, which provides the acquiring firm instant access to new markets (Shimizu et al., 2004). Compared to other entry modes, cross-border acquisition offers clear advantage of instant access to already established foreign resources, such as research and development (R&D) capabilities,

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<sup>1</sup>While legally speaking, merger activities differ slightly from acquisition activities: merger refers to consolidation of two companies into one new company; acquisition refers to the purchase of one company's share by another without an establishment of a new company. From the economic outcome point of view, the boundary between the two activities are becoming more and more blurred. In fact, nowadays a lot of studies use either merger or acquisition to refer to the previously known term M&A. In this paper, the term acquisition is used to generalize a deal when one company seeks a percentage of another company's ownership.

instead of suffering through the time-consuming process of internal growth (Vermeulen and Barkema, 2001; Belderbos, 2003; Deng, 2007). In addition, cross-border acquisition also provides control over foreign asset, which in turn has a bearing on the firm value. Barbopoulos et al. (2014) show in their study that acquisition of foreign assets, especially tangible ones, has significant positive effect on the shareholder wealth.

As a dynamic learning process, various aspects and processes of cross-border acquisitions are covered, for instance, pre-acquisition due diligence and negotiation, and post-acquisition integration (Shimizu et al., 2004). Knowledge and experience learned from a cross-border acquisition can affect a company's performances in future cross-border acquisitions, as Hitt et al. (1998) present in their study that learning will improve the chance of future success. The best learning experience, Hayward (2002) argues, is obtained through acquisitions that are neither highly similar nor highly different to the acquisition of focus.

Cross-border acquisitions as a value creating strategy is one of the most popular topics in the finance field. Numerous researches from both theoretical and empirical perspectives have been conducted in order to analyze the impact on firm value and uncover the cause of value creation or value destruction in the cross-border acquisition activities. Three major hypotheses have been established during the research process: managerialism hypothesis, hubris hypothesis, and synergy hypothesis (Seth et al., 2002).

Managerialism hypothesis focuses on the conflict of interest between company managers and shareholders. Baumol (1962) argue that shareholder value of companies with a managerial set up will suffer in such way that shareholder's interest becomes the expense of managers' pursuance of sales or growth maximization. Seth et al. (2000, 2002) suggest, in the context of managerialism hypothesis, the managers will knowingly overpay for the acquisition to satisfy their own needs: empire building and risk reduction, all of this is done while sacrificing shareholder's benefits.

Denis et al. (2002) further explain the underlying causes of such managerial behavior. First of all, managing a multinational firms bestows power and prestige on the manager. Secondly, in most cases, managerial compensation is positively correlated to the size of the firm. Thirdly, the risk of manager's undiversified personal portfolio is reduced through global diversification. As a result, managers have strong motivation to pursue value reducing strategy for the firm.

Add on top of that, monitoring managerial behavior and decision making in a complex globally diversified firm can be very difficult.

The hubris hypothesis (Roll, 1986), on the other hand, suggests that the acquisition premium reflects nothing but a random error due to the manager's mistake in the target company evaluation, that is, overpaying for the target. Roll (1986) argues that the hubris hypothesis is consistent with strong-form market efficiency, which assumes asset prices reflect fully all the relevant information. According to hubris hypothesis, the combined value of the acquirer and target should fall slightly, and the amount of value decrease reflects the acquisition cost. Although perfect market efficiency is unlikely, Roll (1986) suggests the concept being used as a benchmark of comparison against other hypothesis.

Seth et al. (2000) further test the hubris hypothesis and refine it as such that acquisitions will generate zero total gain due to the adverse effect on the shareholder wealth of the acquiring company and the target company: one declines while the other one increases respectively.

The synergy hypothesis (Bradley et al., 1988; Seth, 1990; Kogut and Zander, 1993) proposes that the value of the combined company will exceed the sum of the values of the individual companies. Or simply put:  $1 + 1 > 2$ . According to Seth (1990); Seth et al. (2000, 2002), the sources of the excess gain from cross-border acquisition are:

- the potential to transfer valuable intangible assets between the acquirer and the target;
- new valuable production-investments opportunities for the combined company that come with skills and resources acquired from the target company, which leads to the increased value of the acquirer in its home country;
- new market development opportunities by overcoming limited or restricted market growth in home country;
- reduced systematic risk and total risk as a result of the increased level of financial market integration.

In addition, Denis et al. (2002) suggest that the synergy from global diversification can be the result of:

- extended market for information-based assets;
- increased flexibility within the firm to respond to various institutional differences, such as prices, tax codes etc.;
- reduced cost on international diversification compared to individuals, which leads to investor's willingness to pay a premium for globally diversified firms.

In reality, there can be multiple presence of the managerialism, hubris, and synergy hypothesis, as shown in the studies by Seth et al. (2000, 2002). Overall though, the synergy hypothesis has been a dominant one in explaining the value creation in the cross-border acquisitions.

Empirical studies on short-term returns during announcement window have shown mixed results. Some researches show that cross-border acquisitions generate significant positive returns to the acquirer (Doukas and Travlos, 1988; Eun et al., 1996; Seth et al., 2002; Chari et al., 2009; Barbopoulos et al., 2014). As an example, Seth et al. (2000) present the result that post-acquisition combined company enjoys an average increase in value of as much as 7.5 percentage comparing to the pre-acquisition individual companies. On the contrary, Denis et al. (2002); Kuipers et al. (2009) find negative result on acquirer returns in international acquisitions. There are also results that shows inconclusiveness. Dos Santos et al. (2008) suggest that there is a lack of evidence on the correlation of cross-border acquisition and value destruction, however, they find significant diversification discount, a striking 24 percent, in their industrial diversification subsample. While comparing domestic and cross-border deals Moeller and Schlingemann (2005) find significant lower acquirer returns in the US originated cross-border acquisitions relative to the domestic acquisitions.

## 2.2. *Emerging market acquirers*

Though the advanced economies, or in other words the developed countries, have been the ones from which majority of the cross-border acquisitions are initiated, the emerging markets are catching up at a great speed. Late 1990s and early 2000s saw the beginning of a fast growing trend in the cross-border acquisition activities by emerging market acquirers. Due to

their distinctive economic characteristics, emerging market acquirers quite often exhibit unique attributes during the cross-border acquisition activities.

There are various theories and perspectives regarding the motivations for internationalization by emerging market firms. Deng (2004) presents that emerging market firms generally demonstrate five motivations when engaging in international investments: market-seeking motivation, risk diversification-seeking motivation, resource-seeking motivation, technology-seeking motivation, and strategic asset-seeking motivation. Resource-seeking in this case mainly refers to natural resources. Some other studies categorize natural resource and technology into the strategic asset class (Peng et al., 2008; Wu and Xie, 2010; Nicholson and Salaber, 2013). From here on, strategic asset is used as a category covering natural resource, technology related assets, and other strategic assets.

Market-seeking motivation is very similar to the method mentioned earlier in which foreign acquisition is used as a market entry mode. It provides the acquirer the quick access to already established external market as well as the control over internal strategic resources. Such market-seeking motivation is mainly driven by either competitiveness in the domestic market (Wu and Xie, 2010), or the limitation of effective demand locally (Deng, 2004). By expanding into new geographic locations, the acquirer eliminates the constraints associated with current market and its existing players (Deng and Yang, 2015). Deng (2007) also suggest that foreign acquisitions can be used to help acquirers establish their image through brand names of target companies. Several studies have shown that cross-border acquisition is the fastest means for emerging market companies to expand internationally (Belderbos, 2003; Deng, 2007, 2009).

Risk diversification is another important driver for overseas investments. As Denis et al. (2002) point out, internationalization activity can improve flexibility towards price fluctuation and better equip the acquirer with more means to quickly respond to such risks. In his study on Chinese market, Deng (2004) argues risk diversification motive is mainly pursued by state-owned trading companies, which also benefit from the government's encouragement, both financially and politically. Government ownership has a strong presence in some of the emerging markets, and poses unique challenges as well as conflicts in the decision-making and value creating process, this will be discussed in details later.

Many researches suggest strong presence of strategic asset seeking motivation in the

cross-border acquisitions by emerging market acquirers, for example, the pursuance of natural resources by Chinese acquirers (Deng, 2004, 2007, 2009; Rui and Yip, 2008), and the highly frequent activities by Indian companies in the technology related industry (Sun et al., 2012). The intangible resources and innovation based knowledge, such as R&D, are gaining more attention as well (Luo and Tung, 2007). Deng (2004) argues that such strategic asset seeking driven activity serves the purpose of maximizing company's overall performance and increasing the competency.

Another import theory is from the strategic management point of view, which includes three leading perspectives:

- the industry-based view (Porter, 1980);
- the resource-based view (Barney, 1991);
- the institution-based view (Peng et al., 2009, 2008).

In a more recent study, Sun et al. (2012) use this strategy tripod as one main basis for their analysis on emerging market companies' outward acquisitions. The three strategic views are summarized and explained as the following:

*The industry-based view* suggests that developed market companies usually have controlling power over high-end value-added activities, while emerging market companies dominant in low-end value-added activities, such as low labor cost for manufacturing process. Hence, as part of their development needs, emerging market companies use foreign acquisitions to update their low-end value-added activities.

*The resource-based view* contains two perspectives: the springboard perspective, and the catch-up and learning perspective. Luo and Tung (2007) introduce the springboard perspective to explain the internationalization process of emerging market firms. According to their springboard theory, emerging market firms engage in internationalization activities to acquire critical resources in order to compete more effectively against international rivals both in their home market and in new global markets, and to overcome their latecomer disadvantages in foreign markets. The catch-up and learning perspective is closely associated with the argument presented by Shimizu et al. (2004), that the acquirer uses the cross-border acquisition as a

learning process to improve their future success.

*The institution-based view* suggests that the cross-border acquisition activities are either encouraged or discouraged by domestic institutions and trade liberalization, such as the government policy at both political and financial level regarding foreign investments.

Despite of various theories and perspectives, at the core lies the question of whether such acquisition activities would create value to the firm, or destroy value. The general value creating hypotheses of cross-border acquisitions: hubris, managerialism, and synergy, are broadly used in the analysis of acquisitions initiated by emerging market acquirers. These three hypotheses remain very much the same for the emerging market acquirers with some additional aspects. In addition to the previously discussed characteristics of the managerialism hypothesis, it also contains further implication of pride in the emerging market acquirer context. Hope et al. (2011) find evidence suggesting a higher premium is knowingly being paid when the transaction displays national pride.

One additional hypothesis frequently associated with emerging market acquirers is the bootstrapping hypothesis. According to bootstrapping hypothesis, the higher corporate governance standards of the target company is seen as an advantage and the acquirer will voluntarily bootstrap itself to such target. As a result, positive return is enjoyed by the acquirer (Khanna and Palepu, 2004; Martynova and Renneboog, 2008; Bhagat et al., 2011).

A series of empirical studies have been conducted to test whether emerging market acquirers experience positive returns around the announcement window. The results from these studies are mixed. Aybar and Ficici (2009) examine 433 cross-border deals mainly from Asian countries between 1991 and 2004, and show value destruction in over half of the sample. Bhagat et al. (2011) test 698 acquisitions made by emerging market companies between 1991 and 2008 and find significant positive market response on the announcement day. There are also studies concentrated on individual market. Gubbi et al. (2010) study 425 cross-border acquisitions conducted by Indian companies from 2000 to 2007 and find significant positive abnormal returns, especially when the target is from developed economy. Ning et al. (2014) use 335 deals by Hong Kong Stock Exchange listed Chinese acquirers between 1991 and 2010 and show positive stock price reaction on average.

### 2.3. *On measuring acquirer return*

Various empirical methods have been used in order to measure the acquirer return during the cross-border acquisition announcement. These methods can be divided into several groups. By the types of data being used in the empirical test: those that utilizes accounting data from financial statements, and those that employs stock price data. By the period which the test covers: those that analyse long-term returns, and those that analyse short-term returns.

The use of accounting data is usually associated with long-term return analysis, such as the study by Bertrand and Betschinger (2012) on acquisition performance by Russian acquirers, in which return on assets (ROA) is used as the profitability measure; or the study by Capron (1999), in which revenue data is used in the analysis. However, as the accounting standards vary across different countries, use of accounting data might pose unnecessary risk of inaccuracy especially in a multi country study. Another risk associated with the usage of accounting data is the possibility of data manipulation Cording et al. (2008).

Buy and hold abnormal return (BHAR) is another measure used in some analysis of long-term return (Bouwman et al., 2009). BHAR utilizes the long-term stock price based data, often one or two years after the announcement, as an indicator of acquirer value change. While the stock performance is considered to be relatively unbiased, there can be challenges in using long-term stock price data. The main challenge is that there can be other factors, either company related or market related, which impact the stock price during the time period between acquisition announcement and the end of holding time.

Majority of the researches done on the subject of company value or shareholder wealth use event study method with short-term stock return as an indicator (just to name a few: Aybar and Ficici, 2009; Bhagat et al., 2011; Gubbi et al., 2010; Moeller and Schlingemann, 2005; Seth et al., 2002; Travlos, 1987). This kind of event study uses daily stock return over a short event window. Such approach have several advantages: first of all, it adds precision in measuring the market reaction; secondly, it minimises the possible impact of other uncorrelated events (Brown and Warner, 1980; Jensen and Ruback, 1983).

#### 2.4. *Main predictors of acquirer return*

There are many predictors that have been used to study the acquirer return. In this subsection, a few of those that are relevant to this thesis are listed and explained.

Based on institutional development, Gubbi et al. (2010) use several predictors of firm value in their study of cross-border acquisitions by Indian firms, namely developed market acquisitions, economic distance, and institutional distance. Meyer et al. (2009) argue that a more developed institutional environment provides better intellectual property protection, as well as offers lower cost of market transaction, which are very attractive to foreign companies. Deng and Yang (2015) point out that higher institutional development is also associated with better government effectiveness. Such effectiveness means sound economic and regulative policies which makes them desirable to foreign investors. Gubbi et al. (2010) find significant positive acquirer return when the target comes from a more developed institutional environment.

Natural resources are crucial elements to economic development. One of the main motives for emerging market companies to conduct foreign acquisitions is to gain access and control over a continuous supply of natural resources from the target nation (Deng and Yang, 2015; Stucchi, 2012; Nicholson and Salaber, 2013). Empirical test in one of the subsamples by Deng and Yang (2015) show positive result between the natural resources availability in the target nation and the number of foreign acquisitions by emerging market companies. Nicholson and Salaber (2013) argue that the pursuit of natural resources varies among different emerging markets, for instance, Chinese market is heavily involved in natural resources related cross-border acquisitions, while India focuses more on other strategic assets. The results of their study show higher return on acquiring company's value when the acquirer comes from Chinese manufacturing industry, which is the industry that is heavily dependent on natural resources. An interesting finding to note by Deng and Yang (2015) is that there is a strong presence of government ownership in those companies actively seeking natural resources.

As previously mentioned, government ownership in acquiring company is one important perspective regarding value creation or destruction, as it has strong implication on the company's strategy planning and decision marking. Such influence is often observed in the principal-principal conflict and the principal-agent conflict. In some of the emerging markets,

government can interfere with the company's operations through either becoming a majority owner (the principal-principal conflict), or appointing government officials as managers with decision-making power (the principal-agent conflict) (Claessens et al., 2000, 2002; Ning et al., 2014). This is especially noticeable in those industry sectors that are considered strategically important, such as natural resources related industry (Deng and Yang, 2015). In the cross-border acquisition process, through majority ownership or the government official appointed as manager, the government will approach the deal in such way that first and for most its own benefit or wealth is guaranteed, instead of the value creation for all the shareholders. Furthermore, Chen and Young (2010) argue that the presence of government ownership in the acquiring firm may present political problems in the target country. Empirical studies, such as those conducted by Chen and Young (2010); Ning et al. (2014) confirm negative correlation between government ownership and firm value during the cross-border acquisition announcements for Chinese acquirers. One thing to note is that the use of government ownership involvement and natural resources related targets as predictors are not very common in the multi-country analysis. These two variables mainly appear in studies that focus on one single country.

Another interesting driver that influences both the acquirer return and the post-acquisition integration is the cultural distance. Upon introduction, cultural dimensions (Hofstede, 1980) have been widely used in organizational studies. In cross-border acquisition activities, the greater the cultural distance, the higher the risk of cultural conflict, which can result in engaging expensive and time-consuming culture turnaround (Hofstede, 1989). Cultural distance has been used as one important predictor to evaluate the acquisition performance in a number of researches (e.g.: Aybar and Ficici, 2009; Brock, 2005; Dikova and Rao Sahib, 2013; Morosini et al., 1998; Nicholson and Salaber, 2013). It is argued in these studies that the culture distance between the acquirer and the target has strong effect on the return of firm values, as well as an invaluable role in post-acquisition integration, which consequently determines the ultimate success of the acquisition. Empirical results are mixed though on whether close cultural proximity produces more favourable return. Morosini et al. (1998); Sarala and Vaara (2010) find positive result supporting the argument that closer cultural proximity enhances acquisition performance, while Dikova and Rao Sahib (2013) find inconclusive results.

Capron and Shen (2007) carry out an extensive study on the target's private or public status and its implication on acquirer return. It is argued in the study that the favorable market reaction

to private target acquisition is due to the so called “private firm discount”. Officer (2007) document an average of 15 to 30 percent of acquisition discount on private targets. Capron and Shen (2007) argue that as the acquirer is able to purchase a private target at a substantial discount compared to purchasing a public target, it benefits from a more advantageous split of value among itself and the target, that is, better value appropriation. Another important perspective to value creation, according to Capron and Shen (2007), is the information availability for target selection and evaluation during the acquisition activity. The capital market serves as an information distribution and asset evaluation mechanism for publicly listed companies, while the information on private companies can be more difficult to obtain, which means higher search costs. Such difference in information availability affects acquirer’s target selection and its performance during acquisition. The empirical result from Capron and Shen (2007) shows that acquirers of private targets performs better at the acquisition announcements compared to those acquiring public targets.

## 2.5. Hypotheses

Following the existing literature, a number of hypotheses are introduced. Although there are contradictory findings with regard to acquirer return at the cross-border acquisition announcements, it is widely expected as per the synergy hypothesis that the acquirer will enjoy positive return from such announcement (Bradley et al., 1988; Seth, 1990; Kogut and Zander, 1993). In addition to synergy hypothesis, the bootstrapping hypothesis suggests that acquirers will enjoy positive return from stock market when announcing the acquisition of a target from an advanced economy (Khanna and Palepu, 2004; Martynova and Renneboog, 2008; Bhagat et al., 2011). Among different types of targets, those from developed markets will offer a series of benefits to the acquirer. For instance, higher corporate governance, which will signal to the capital market a potential improvement of the governance level in the acquirer. Another potential benefit is the improved shareholder protection, which in turn will boost investor’s confidence in the acquirer. Thus, the first hypothesis to be tested in this study is introduced

***H.1: Emerging market acquirers enjoy positive abnormal returns when the target company is from an advanced economy.***

Government ownership involvement in the acquiring firm poses various risks, such as

principal-principal conflict, principal-agent conflict (Claessens et al., 2000, 2002; Ning et al., 2014). These conflicts deteriorate investor's confidence in the company, which further affects their investment decisions. Along several prior studies, a negative relationship between acquirer's government ownership and acquirer return is expected. Hence, the second hypothesis is formulated as

***H.2: Emerging market acquirers enjoy positive abnormal returns if there is no government ownership involved.***

In a recent study, Deng and Yang (2015) point out an interesting observation that there is a strong presence of government ownership in those companies actively seeking natural resources. Natural resources have always been considered strategically and politically crucial at national level. Due to their importance, it is not surprising that emerging market governments have strong hold and control in the natural resources related industries. Considering the negative relationship between government ownership and acquirer return, it is then expected that acquisitions in natural resources related industries will experience less favorable returns.

***H.3: Emerging market acquirers enjoy positive abnormal returns from non-natural resources related acquisitions.***

Prior studies have suggested various possible predictors that influence acquirer return, such as payment method, target status, cultural distance, institutional distance etc. In this study, a number of relevant predictors are selected and tested to find evidence on whether these predictors influence the acquirer's abnormal return significantly. The fourth hypothesis consists of several sub-hypotheses, each represents one selected predictor.

In testing the Indian originated cross-border acquisitions, Gubbi et al. (2010) use economical distance and institutional distance, and find supporting evidence that acquirers benefit from acquiring a target with higher governance standards. I use similar approach to test whether this theory holds true for other emerging markets. Hence,

***H.4a: Economic distance is positively related to acquirer's abnormal return.***

***H.4b: Institutional distance is positively related to acquirer's abnormal return.***

A closer cultural proximity can reduce the risks related to cultural differences and can

hence improve the post-acquisition integration Morosini et al. (1998); Sarala and Vaara (2010). Therefore, it is assumed that the greater the cultural proximity, or cultural distance, the lower the possibility of acquisition success. This leads to the following hypothesis

***H.4c: Cultural distance is negatively related to acquirer's abnormal return.***

Bhagat et al. (2011) use the relative deal size as a variable. The relative deal size is calculated as the ratio of transaction value to acquiring firm's market capitalization. The empirical result shows a significant positive relationship between the relative deal size and the acquirer return. In this study, the relative deal size is also used as one predictors

***H.4d: Relative deal size is a positive predictor of acquirer's abnormal return.***

Following the study by Capron and Shen (2007), the target company's private or public status is used as another variable in this thesis. Capron and Shen (2007) find a positive correlation between target company's private status and more favorable acquirer return. Thus, the final hypothesis is introduced

***H.4e: Private target status positively influences acquirer's abnormal return.***

### 3. Data

The definition of sample data, collection method and selection criteria are explained in this section. A brief description of the data is also presented at the end of this section.

#### 3.1. Definition of sample data

First of all, a selection of emerging markets are chosen. According to MSCI<sup>2</sup>, emerging markets are defined based on three criteria: economic development, size and liquidity requirements, and market accessibility. Different organizations have issued various list of emerging markets. In this study, I choose five emerging markets: Brazil, Russia, India, China, and South Africa, abbreviated to BRICS. All five countries are classified as emerging markets according to different sources, such as MSCI<sup>3</sup>, IMF<sup>4</sup>, FTSE<sup>5</sup>. O'Neill (2001) initially introduced the acronym BRIC to refer to the fast growing emerging markets of Brazil, Russia, India, and China. In year 2010, South Africa joined the group and it has since been referred to as BRICS. Based on the statistical data presented by BRICS<sup>6</sup> and IMF, BRICS countries represent approximately 20 percent of the gross world product. In addition, the five countries show a great cultural and geographical diversity. Therefore, it is fair to say that they are the icons of the current emerging markets and to certain extent can represent the overall emerging economy.

Secondly, the time period covered by this study is defined as January 1, 1995 to December 31, 2014. The reason for selecting such time period is that during the early 1990s, there were either significant political or economical changes in the BRICS countries. To name a few: the establishment of the Russian Federation in 1991 after dissolution of the Soviet Union; the

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<sup>2</sup>MSCI Market Classification Framework, [http://www.msci.com/resources/products/indexes/global\\_equity\\_indexes/gimi/stdindex/MSCI\\_Market\\_Classification\\_Framework.pdf](http://www.msci.com/resources/products/indexes/global_equity_indexes/gimi/stdindex/MSCI_Market_Classification_Framework.pdf) (June 2014)

<sup>3</sup>MSCI Emerging Markets Indexes, [http://www.msci.com/products/indexes/country\\_and\\_regional/em/](http://www.msci.com/products/indexes/country_and_regional/em/)

<sup>4</sup>World Economic Outlook, Legacies, Clouds, Uncertainties, <http://www.imf.org/external/pubs/ft/weo/2014/02/pdf/text.pdf> (October 2014)

<sup>5</sup>FTSE Annual Country Classification Review, [http://www.ftse.com/products/downloads/FTSE-Country-Classification-Update\\_latest.pdf](http://www.ftse.com/products/downloads/FTSE-Country-Classification-Update_latest.pdf) (September 2014)

<sup>6</sup>BRICS Joint Statistical Publication, [http://brics.ibge.gov.br/downloads/BRICS\\_Joint\\_Statistical\\_Publication\\_2014.pdf](http://brics.ibge.gov.br/downloads/BRICS_Joint_Statistical_Publication_2014.pdf) (2014)

introduction of Plano Real<sup>7</sup> in Brazil in 1994; dismantlement of Apartheid<sup>8</sup> in South Africa in 1994. In addition, from the level of activity perspective, outbound cross-border acquisitions are starting to grow popularity during the late 1990s among emerging markets.

### 3.2. *Data collection*

The data used in this study is obtained from two systems: Thomson Financial Securities Data Company (SDC) and Thomson One.

The primary list of cross-border acquisitions are obtained from the Mergers and Acquisitions database of SDC. The criteria of selection consist of:

- Acquirer nation is one of the BRICS countries.
- The deal has to be announced and completed during the time period January 1, 1995 to December 31, 2014.

Using afore mentioned criteria, a total of 5143 observations are obtained. Various information relating to the deals are also retrieved from SDC, including date announced, target nation, target industry, acquirer industry, percentage of shares acquired, percentage owned after transaction, value of transaction, target public status, acquirer public status, percentage of cash or other types of payment, target government ownership involvement, and acquirer government ownership involvement etc. Because stock returns are used as the measure of acquirer returns, I further select the deals announced by publicly listed companies, that is, acquirer status being public. This reduces the sample size to 2303.

Before retrieving the stock price data, a list of stocks being traded in the BRICS countries' stock exchanges is obtained from Thomson One. This list is then matched against the acquirers that exist in the primary cross-border acquisitions list, which returns a total number of 1304 deals.

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<sup>7</sup>A set of economic measures introduced in 1994 to combat severe inflation problem and stabilize the Brazilian economy.

<sup>8</sup>A system of racial segregation enforced in South Africa from 1948 to 1994.

The stock price data is retrieved from Thomson One, as well as other related acquirer data, such as acquirer's market capitalisation from the last fiscal year, acquirer's year of establishment etc. In order to estimate the acquirer's expected stock return, which is described in details in Section 4 Methodology, one year of daily closing stock price of both the acquirer and the benchmark index prior to the announcement date is required. There are a total of 1087 deals that have the required stock price data available.

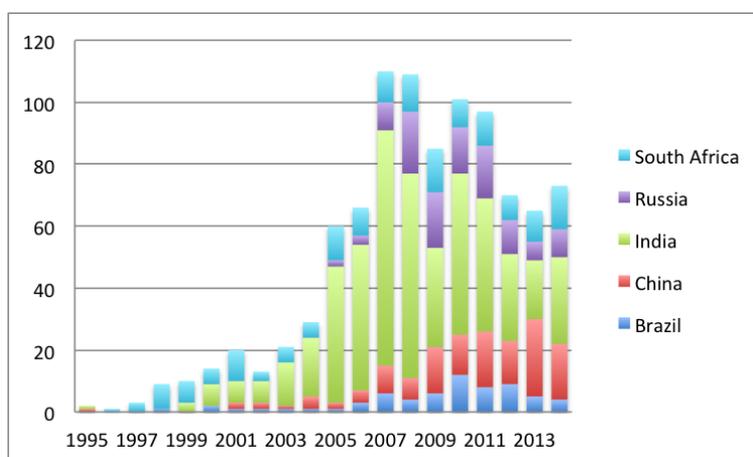
Upon further examination of the data, there are 129 cases where the same acquirer announced multiple acquisitions during the 11 day event window, which can contaminate the analysis as it will be hard to determine which announcement is driving the stock price movement. Therefore, these cases are eliminated from the data set, leaving a final sample size of 958 deals.

### 3.3. Data description

Table 1 gives an overview of the full sample, which consists of 958 cross-border acquisition deals. The full sample is used in the event study.

As can be seen from Table 1, the number of cross-border acquisition deals conducted by emerging markets has been growing since late 1990s. The first peak happened around 2007 and 2008, with a small dip in 2009, the second peak occurred immediately in 2010 and 2011 and has since remained at a more steady level. The following Figure 1 shows the trend more clearly.

**Figure 1 Number of cross-border acquisitions by country, full sample (N=958).**



A further analysis of the major target markets and target industries is shown in Table 2. It

**Table 1 Number of cross-border acquisitions by country and by year, full sample.**

This table contains the full sample of 958 acquisitions, listed by year of announcement and acquirer country, which are used in the event study.

Year	Brazil	China	India	Russia	South Africa	Total
1995		1	1			2
1996					1	1
1997					3	3
1998	1				8	9
1999			3		7	10
2000	2		7		5	14
2001	1	2	7		10	20
2002	1	2	7		3	13
2003	1	1	14		5	21
2004	1	4	19		5	29
2005	1	2	44	2	11	60
2006	3	4	47	3	9	66
2007	6	9	76	9	10	110
2008	4	7	66	20	12	109
2009	6	15	32	18	14	85
2010	12	13	52	15	9	101
2011	8	18	43	17	11	97
2012	9	14	28	11	8	70
2013	5	25	19	6	10	65
2014	4	18	28	9	14	73
Total	65	135	493	110	155	958

is very obvious that most of the top target markets are those that are either geographically and culturally very close to or previously politically tied to the acquirer nations.

As for target industries, there are some differences across the BRICS countries. Despite of the differences, the natural resources related industries, such as Mining, Oil and Gas; Petroleum Refining, are very popular targets among them all.

**Table 2 Top five target nations / regions and industries.**

This table lists the most popular target nations and target industries for each of the BRICS country. Deal% are ratios of the number of acquisitions conducted in the afore mentioned target nations or target industries out of the total number of acquisitions from the same acquirer nation over the time period between January 1, 1995 and December 31, 2014. Top 5 target nations and top 5 target industries are not correlated. Top 5 target nations includes regions as well. Region is defined as a special economic area which has significant different economic characteristics compared to the acquirer market, such as Hong Kong.

Country	Top 5 target nations	Deal%	Top 5 target industries	Deal%
Brazil	Argentina	24.6%	Oil and Gas; Petroleum Refining	23.1%
	United States	18.5%	Commercial Banks, Bank Holding Companies	10.8%
	Uruguay	9.2%	Transportation Equipment	9.2%
	Portugal	7.7%	Food and Kindred Products	7.7%
	Mexico	6.2%	Metal and Metal Products	4.6%
Russia	Cyprus	11.8%	Oil and Gas; Petroleum Refining	17.3%
	Belarus	6.4%	Mining	16.4%
	Kazakhstan	6.4%	Commercial Banks, Bank Holding Companies	13.6%
	Ukraine	5.5%	Investment & Commodity Firms,Dealers,Exchanges	11.8%
	Canada	4.5%	Electric, Gas, and Water Distribution	8.2%
India	United States	26.8%	Business Services	18.5%
	United Kingdom	12.8%	Drugs	12.4%
	Germany	6.9%	Prepackaged Software	7.1%
	Australia	3.2%	Chemicals and Allied Products	6.1%
	Singapore	3.0%	Mining	5.1%
China	Hong Kong	17.0%	Mining	14.1%
	United States	14.8%	Commercial Banks, Bank Holding Companies	8.9%
	Canada	11.1%	Electronic and Electrical Equipment	8.9%
	Australia	10.4%	Investment & Commodity Firms,Dealers,Exchanges	8.1%
	Germany	7.4%	Machinery	7.4%
South Africa	United Kingdom	25.8%	Business Services	19.4%
	Australia	15.5%	Mining	15.5%
	United States	5.8%	Wholesale Trade-Durable Goods	7.1%
	Canada	4.5%	Investment & Commodity Firms,Dealers,Exchanges	5.8%
	Germany	4.5%	Food and Kindred Products	5.2%

## 4. Methodology

This section details the methodology used in this thesis. First of all, the event study, including its structure and key components, is explained. Secondly, the cross-sectional regression analysis and related variables are defined.

To test the hypotheses, I first use the event study to determine whether cross-border acquisition announcements generate positive returns on acquirer value. The cumulative abnormal return calculated from the event study is then regressed on a set of variables to see if there are specific factors that drive the abnormal returns.

As the measurement of acquirer return, short-term stock performance is used in this study. The stock performance is considered to be relatively unbiased compared to other measures of firm value, such as accounting data (Cording et al., 2008). And the use of stock performance as an assessment of firm value has been conducted in various studies (Doukas and Travlos, 1988; Moeller and Schlingemann, 2005; Gubbi et al., 2010).

### 4.1. *Event study*

Event study has been widely used in corporate finance to study the impact of new information on the value of a firm. According to MacKinlay (1997), event study has its roots in a study by Dolley (1933). The modern methodology of event study is introduced by Fama et al. (1969) while studying the relationship between stock splits and stock returns. An event study closely examines the impact of a new piece of information, aka the event, when introduced to the market. It is therefore fitting to use this methodology to study the acquisition announcement and its impact on the company's stock return.

The general structure of an event study, according to MacKinlay (1997), consists the following steps:

1. Specification of the research questions;
2. Definition of the event window;

3. Selection of sample data;
4. Estimation of the expected returns;
5. Calculation of the abnormal returns;
6. Design of the test structure. Testing whether the abnormal return is statistically different from zero.

The event study presented in this paper is conducted in a similar fashion. Research questions are discussed in Section 2.5 Hypotheses. Data selection and collection are detailed in Section 3 Data. Other key items used in this study are addressed as follows:

#### 4.1.1. *Event window*

Event window is the time span around the event day during which the analysis is conducted. The length of the event window can be either long or short. It is determined based on the need of each individual study. In this paper, the event day,  $t = 0$  is defined as the announcement day of an acquisition. Three sets of event windows are introduced:

- 11-day event window,  $(-5, +5)$  days around the event day;
- 7-day event window,  $(-3, +3)$  days around the event day;
- 3-day event window,  $(-1, +1)$  days around the event day.

The reason for using different event windows is to capture the overall picture of the abnormal return as much as possible, as it is expected that the cumulative abnormal return is different during various event windows. Abnormal return is expected to be highest on the event day, as well as one day immediately preceding the event day. Hence, the event window  $(-1, +1)$  should best capture any significant abnormal return.

In his study on efficient capital market, Fama (1970) argues that any abnormal return observed in the stock price is only temporary, while in the long run, the stock price should resume the random walk fashion. It is therefore expected that during the event window  $(-5, +5)$ , there should not be any statistically significant abnormal return.

#### 4.1.2. *Abnormal returns*

Abnormal return is defined as the difference between a stock's actual return and its expected return.

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (1)$$

where,

$AR_{i,t}$  is the abnormal return of stock  $i$  at time  $t$ ,

$R_{i,t}$  is the actual return of stock  $i$  at time  $t$ ,

$E(R_{i,t})$  is the expected return of stock  $i$  at time  $t$ .

The actual return of a stock is calculated using the closing prices of two consecutive trading days.

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}} \quad (2)$$

where,

$R_{i,t}$  is the actual return of stock  $i$  at time  $t$ ,

$P_{i,t}$  is the closing price of stock  $i$  at time  $t$ ,

$P_{i,t-1}$  is the closing price of stock  $i$  at time  $t - 1$ , that is, one trading day prior to day  $t$ .

There are various ways of calculating the expected return, for instance, Capital Asset Pricing Model (CAPM) (Sharpe, 1964), market and risk adjusted return model (Black, 1972; Brown and Warner, 1980, 1985), market adjusted returns model (Brown and Warner, 1980, 1985). The most widely used model, however, is the market model introduced by Sharpe (1963). The market model has been tested extensively in various event studies, such as the papers by Scholes (1972), Brown and Warner (1980, 1985), MacKinlay (1997), Binder (1998), just to name a few.

The market model is applied in this study to estimate the expected stock return. The market model suggests ordinary least square (OLS) regression of the stock return on the market return during an estimation window outside the event period. The intercept and the slope of the regression can be then used to estimate the expected return during the event period.

The estimation window is typically set to half a year to one year prior to the event period. In

this study, the estimation window is defined as one year prior to the event window. In practice, the closing prices of stocks and markets from days  $-255$  to  $-6$  are collected, based on which the stock return and market return are calculated using Equation (2).

The expected return of a stock is then estimated using the following equation:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \quad (3)$$

$$E(\varepsilon_{i,t}) = 0$$

$$\text{var}(\varepsilon_{i,t}) = \sigma_{\varepsilon_i}^2$$

where,

$E(R_{i,t})$  is the expected return of stock  $i$  at time  $t$ ,

$\alpha_i$  is the estimator of stock  $i$ 's risk relative to the market, aka the intercept of the OLS regression,

$\beta_i$  is the estimator of the volatility of stock  $i$  in comparison with the market portfolio, aka the slope of the OLS regression,

$R_{m,t}$  is the return of the market portfolio at time  $t$ ,

$\varepsilon_{i,t}$  is the zero mean disturbance term.

Taking into consideration the cultural and geographic diversity of the five different markets, five different benchmark indexes are selected for each one of the BRICS countries:

- *IBrX-50 Index* for Brazilian market.
- *MICEX Index* for Russian market.
- *CNX 500 Index* for Indian market.
- *SSE Composite Index* for Chinese market.
- *JALSH Index* for South African market.

These market indexes are major ones in their respective markets, which should then provide

a more reliable base for calculation. Thus, the abnormal return can be calculated as,

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}) \quad (4)$$

And the cumulative abnormal return, CAR, is defined as

$$CAR_{i,(T_1,T_2)} = \sum_{t=T_1}^{T_2} AR_{i,t} \quad (5)$$

where,

$T_1$  and  $T_2$  are the beginning and ending days of the event window.

#### 4.1.3. *Statistical test*

To test whether the cumulative abnormal return is statistically indifferent from zero,  $t$ -test is conducted with the following formula,

$$t = \frac{CAR}{\sigma/\sqrt{n}} \quad (6)$$

where,

$CAR$  is cumulative average abnormal return,

$\sigma$  is standard deviation of the observed abnormal returns,

$n$  is number of observations.

The  $t$  values are then compared to the critical values at the significant levels 10%, 5%, and 1% of the two-tailed test. The result is considered significant if the value of  $t$  is larger than the critical value.

## 4.2. *Cross-sectional regression*

As the second stage of the empirical test, cross-sectional regression analysis is used to find out if certain factors play significant roles in influencing the acquirer's abnormal return. One thing to note is that, due to the information availability related to the sample acquisition deals, the introduction of various variables further reduces the sample size. The detailed description of the subsample is presented in the Section 5 Results along with different regression models.

### 4.2.1. *Dependent variable*

Based on several previous studies, the following variables are introduced as main factors that could impact the cumulative abnormal return.

***INDUSTRY***: Industry relatedness, measures whether the acquirer and the target are in the related industry. Singh and Montgomery (1987) argue that abnormal return of acquirer is positively affected when acquiring a target from related business. The industry relatedness data is obtained through SDC. It takes the value 1 if the target company is in the same industry as the acquirer, and value 0 otherwise.

***TSTATUS***: Target status, indicates the public status of the target company. With an extensive study on the target status, Capron and Shen (2007) find that acquiring a private target positively influences the abnormal return to the acquirer. This data is obtained through SDC. It takes the value 1 if the target is a private company, and value 0 otherwise.

***AGOVN***: Acquirer's government ownership involvement, shows whether the acquirer company has government ownership. As previously mentioned, government ownership is a potential risk factor which can raise principal-principal or principal-agent conflicts, which in turn can cause value destruction. Empirical study also supports this view. Pan et al. (2010) find that state or government ownership will deteriorate the acquirer return. This data is obtained through SDC. It takes the value 1 if there is government ownership, and value 0 if not.

***TGOVN***: Target's government ownership involvement, shows whether the target company has government ownership. This data is obtained through SDC. It takes the value 1 if there is,

and value 0 if not.

**ACQAGE:** Acquirer's age, measures the years of establishment of the acquirer company at the time of acquisition announcement. In one earlier study, Sapienza et al. (2006) argue that companies benefit from early stage internationalization. Data on year of establishment is retrieved from Thomson One.

**OWNERSHIP:** Level of ownership, indicates the target company's percentage owned by the acquirer after the transaction. This data is obtained through SDC. According to Gubbi et al. (2010), majority ownership grants acquirer the access to target company's strategic assets, which is considered as an advantage to the acquirer. The level of ownership indicator takes the value 1 if majority of the target's ownership is transferred to the acquirer, and value 0 otherwise.

**DEALSIZE:** Deal size relative to the acquirer's market value. Bhagat et al. (2011) find positive correlation between relative deal size and the acquirer return. The relative deal size is calculated by taking the logarithm of the ratio of the value of transaction to the market capitalization of the acquirer. The value of transaction is obtained from SDC, while the market capitalization value from the last fiscal year is retrieved from Thomson one.

**TECOSTATUS:** Target country's economic status, indicates whether the target nation is categorized as developed country or not. IMF's world economic outlook publication<sup>9</sup> is used as the classification standard. A detailed list of the developed countries can be found in Appendix A.

**CASHPMNT:** Cash payment, indicates if the deal is paid fully by cash. It takes the value 1 if the deal is fully cash financed, and value 0 otherwise. Moeller et al. (2004) run various tests regarding payment method and acquirer return, and find that payment method can influence the acquirer return, however not by itself but when taking into consideration at the same time the target private or public status.

**NATRES:** Natural resources related industry, indicates whether the acquisition is natural resources related. In this study, the natural resources related industry consists of the following industries: Mining, Oil and Gas; Petroleum Refining. This indicator takes the value 1 if the

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<sup>9</sup>World Economic Outlook, Legacies, Clouds, Uncertainties, <http://www.imf.org/external/pubs/ft/weo/2014/02/pdf/text.pdf> (October 2014)

acquisition is natural resources related, and value 0 otherwise.

**ECODIST:** Economic distance, measures the difference of the economic status in the acquirer nation and the target nation. This measure is used by Tsang and Yip (2007) and Gubbi et al. (2010) in their studies. The calculation method used by Gubbi et al. (2010) takes the logarithm of the difference of the real gross domestic production (GDP) between the target nation and the acquirer nation in the year when the acquisition is announced. However, I find that the logarithm does not reflect the negative differences accurately enough, hence, economic distance used in this study is calculated as the nominal difference of real GDP between the target and acquirer nations.

**INSTDIST:** Institutional distance, measures the difference of the economic freedom in the acquirer nation and the target nation. The use of the institutional distance measure has been seen in studies conducted by Meyer et al. (2009) and Gubbi et al. (2010). It is calculated by taking the ratio of the economic freedom index of the target nation to that of the acquirer nation from the year when the acquisition is announced. Values greater than 1 reflects higher institutional development of the target nation relative to the acquirer nation, while values smaller than 1 reflects lower relative institutional development. The economic freedom index is retrieved from the Heritage Foundation<sup>10</sup>.

**CULDIST:** Cultural distance, is the proxy for the cultural distance between the acquirer nation and the target nation. Following the study by Aybar and Ficici (2009) and Chakrabarti et al. (2009), Hofstede's cultural dimensions are used to calculate the cultural distance. The calculation is done based on the method used by Nicholson and Salaber (2013),

$$CD = \sqrt{\sum_{j=1}^4 (CD_{A,j} - CD_{T,j})^2} \quad (7)$$

where,

$CD$  is the cultural distance,

$CD_{A,j}$  is the acquirer nation's cultural index on dimension  $j$ ,

$CD_{T,j}$  is the target nation's cultural index on dimension  $j$ .

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<sup>10</sup>Index of Economic Freedom <http://www.heritage.org/index/>

Hofstede's cultural index<sup>11</sup> consists of six dimensions:

- Power distance index (PDI)
- Individualism versus collectivism (IDV)
- Masculinity versus femininity (MAS)
- Uncertainty avoidance index (UAI)
- Long term orientation versus short term normative orientation (LTO)
- Indulgence versus restraint (IND)

Due to the data availability, only the first four dimensions are used to calculate the cultural distance between acquirer country and target country.

#### 4.2.2. *Cross-sectional analysis*

The cross-sectional analysis is widely used in the firm value related event studies to determine the main drivers of the value change (Aybar and Ficici, 2009; Gubbi et al., 2010; Moeller and Schlingemann, 2005; Nicholson and Salaber, 2013; Seth et al., 2002). Based on the previous studies, the following cross-sectional multivariate model is used to shed light in the impact of the previous mentioned various independent variables to the dependent variable, the cumulative abnormal return value from event window (-1, +1),

$$\begin{aligned}
 CAR_i = & \beta_0 + \beta_1 INDUSTRY_i + \beta_2 TSTATUS_i + \beta_3 AGOVN_i + \beta_4 TGOVN_i \\
 & + \beta_5 ACQAGE_i + \beta_6 OWNERSHIP_i + \beta_7 DEALSIZE_i + \beta_8 TECOSTATUS \\
 & + \beta_9 CASHPMNT_i + \beta_{10} NATRES_i + \beta_{11} ECODIST_i + \beta_{12} INSTDIST_i \\
 & + \beta_{13} CULDIST_i + \varepsilon_i
 \end{aligned} \tag{8}$$

A correlation matrix is first constructed using the basic model with all of the variables. In order to eliminate the multi-collinearity problem, several different models are set up using

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<sup>11</sup>The Hofstede Centre <http://geert-hofstede.com/cultural-dimensions.html>

the variables *AGOVN*, *TECOSTATUS*, *ECODIST*, *INSTDIST*, and *CULDIST*. The similar cross-sectional regression is then run separately for these models. The details of the different models are presented in the Section 5 Results.

## 5. Results

The key findings of the empirical test are presented and discussed in this section. First of all, the results from the event study is shown, followed by the results of the cross-sectional regression analysis. After that, the limitations of the empirical test are discussed.

### 5.1. Event study results

For the event study, the daily abnormal return of acquirers is calculated and analyzed as a first step. Results of daily abnormal return calculation of the full sample 958 deals is listed in Table 3.

**Table 3 Daily abnormal return, full sample.**

This table presents the daily abnormal return of full sample, N = 958, from day –5 to day +5 around cross-border acquisition announcements by emerging market acquirers. Abnormal returns are presented in percentages. Std dev. is the standard deviation.

Day	Max AR	Min AR	Mean	Median	Std dev.	positive:negative
-5	14.72%	-32.98%	-0.085%	-0.15%	0.02736	448 : 510
-4	20.47%	-30.53%	-0.066%	-0.097%	0.02856	447 : 511
-3	18.1%	-31.11%	-0.011%	-0.086%	0.02704	456 : 502
-2	15.12%	-43.1%	0.014%	-0.107%	0.03031	458 : 500
-1	24.43%	-34.98%	0.104%	-0.103%	0.03344	451 : 507
0	27.09%	-37.06%	0.498%	0.119%	0.03512	505 : 453
1	46.22%	-37.98%	0.074%	-0.094%	0.03547	450 : 508
2	17.44%	-32.04%	-0.166%	-0.298%	0.0281	416 : 542
3	12.35%	-37.79%	-0.088%	-0.182%	0.02829	431 : 527
4	38.98%	-31.76%	-0.165%	-0.253%	0.03136	418 : 540
5	18.88%	-38.87%	-0.229%	-0.169%	0.03187	430 : 528

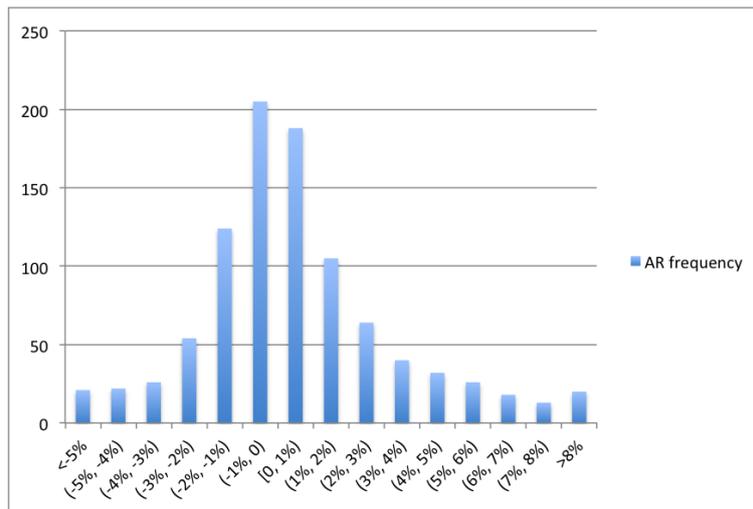
The results show a wide range of abnormal returns from day –5 to day +5. However, if looking at the average daily abnormal return, the highest value is observed on the announcement day, at 0.498%. In addition, more acquirers experience positive daily abnormal return on the announcement day than any other days during the event window. Apart from the announcement day, on day –1 and day +1, acquirers also experience, on average, slightly higher abnormal

returns than other days during the event window at 0.104% and 0.074% respectively. It is worth noting that the single highest daily abnormal return is observed on day +1, at 46.22%. Another interesting observation is that only on the announcement day do the positive daily abnormal returns take the majority position, while on all the other days during the event window majority of the daily abnormal returns are negative.

In summary, daily abnormal returns show that emerging market acquirers benefit from cross-border acquisition announcements, with a positive 0.498% return on the stock on average.

A brief check on the announcement day abnormal return frequency can be found in Figure 2. As shown in the figure, majority of the daily abnormal returns on the announcement day range between  $-1\%$  to  $+1\%$ .

**Figure 2 Frequency of announcement day abnormal return of full sample (N=958).**



Based on the daily abnormal return calculation, cumulative abnormal returns of the acquirers are calculated. To test different hypotheses, the cumulative abnormal return analysis is conducted through several different data panels, which can be seen in Table 4. A total of four different data panels are used:

- Panel A is the full sample, containing all 958 cross-border acquisition announcements.
- Panel B divides the full sample into two subgroups using developed market targets as the category.
- Panel C uses the category of government ownership involvement or not in the acquirer.

- Panel D specifies whether the acquisition is natural resources related or not.

Calculated cumulative abnormal return and its analysis can be seen in Table 4.

For the full sample size of 958 announcements (Panel A), the highest value of cumulative abnormal return, 0.68%, is observed in the 3-day event window  $CAR(-1, +1)$ . This figure is statistically significant based on the  $t$  test result, that is, emerging market acquirers in general enjoy positive returns from cross-border acquisition announcements.

In Panel B, the full sample is divided into two subgroups, those deals with target company from developed countries, and those with target company from non developed countries. Comparing the cumulative abnormal return from the 3-day event window  $CAR(-1, +1)$ , emerging market acquirers enjoy an average positive return at 0.85% when they purchase target companies from developed markets, in contrast to acquisitions of non developed market targets, which only generate an average of 0.28% non statistically significant cumulative abnormal return.

In the previous study by Gubbi et al. (2010), it is shown that acquirers from India enjoy higher positive return when they purchase targets from developed markets. The result from Panel B is in line with this finding from Gubbi et al. (2010), as well as showing a generalized trend in emerging market acquirers. This result also means that Hypothesis 1 is accepted at full sample level.

The following two subgroups of Panel C outline the results of acquirer's cumulative abnormal return taking into consideration the government ownership involvement in acquirer. When the acquirer has government ownership involvement, the average cumulative abnormal return value from 3-day event window  $CAR(-1, +1)$  is negative, -0.06%. On the other hand, if no government ownership is involved, the acquirer benefits from significant positive return at 0.76%.

This result is consistent with the prior researches (Chen and Young, 2010; Pan et al., 2010), that the government ownership involvement is usually seen as a negative thing by investors. Hence, Hypothesis 2 is accepted based on full sample analysis.

When it comes to the natural resources related acquisitions, the results of Panel D are

definitely very interesting. The non natural resources related deals give the acquirer statistically significant positive return at 0.66%, very similar to the overall return from the full sample, during the 3-day event window, However, those acquirers which announce purchase of natural resources related targets also experience positive returns, in fact, even slightly higher returns at 0.77%. Another interesting result to point out is that during the 7-day and 11-day event window, natural resources related acquisitions generate significant positive returns for the acquirers at 1.62% and 1.65% respectively, which are the highest average cumulative abnormal returns observed among all Panels across all event windows.

This result is contradictory to the expectation. Deng and Yang (2015) find that there is a strong presence of government ownership in natural resources related industries, thus, it is expected that similar results would appear in Panels C and D. However, while results from Panel C suggest that non government owned acquirers enjoy significant positive returns, results from Panel D show that acquirers enjoy significant positive return from non natural resources related acquisitions in 3-day event window and significant positive returns from natural resources related acquisitions in 7-day and 11-day event windows. In short, Hypothesis 3 is rejected according to the results from full sample data analysis.

A careful review of the data sample from Panel D shows no evidence of data contamination. Although efforts have been made to find potential explanations for such results, given the available information, no concrete answer has been uncovered. An earlier study by Nicholson and Salaber (2013) show that Chinese manufacturing companies benefit from positive returns when announcing natural resources related acquisitions. It is then a speculation that perhaps, under certain circumstance, investors view the natural resources related acquisitions as a good opportunity for the acquiring company's growth, or a guarantee for the acquiring company's sustainability. This can be suggested as a separate topic to be examined in details in another study.

**Table 4 Cumulative abnormal return, full sample.**

This table shows the cumulative abnormal return of full sample, N = 958, during announcement period of cross-border acquisitions by emerging market companies. Panel A is the full sample, Panel B divides the sample by whether the target company is from developed countries or not, Panel C divides the sample by whether the acquirer has government ownership, and Panel D divides the sample by whether the target company is in natural resources related industries. CAR (-5, +5), CAR (-3, +3), CAR (-1, +1) are the cumulative abnormal returns of the corresponding event windows. Std dev. is the standard deviation. Natural resource related industry refers to either Mining industry or Oil and Gas; Petroleum Refining industry. Cumulative abnormal returns are presented in percentages. \* Cumulative abnormal return is significant at the 0.10 level (2-tailed). \*\* Cumulative abnormal return is significant at the 0.05 level (2-tailed). \*\*\* Cumulative abnormal return is significant at the 0.01 level (2-tailed).

Event window	Mean	Median	Std dev.	positive : negative	t test
Panel A. Full data sample, N = 958					
CAR (-5, +5)	-0.12%	-0.43%	0.1515	458 : 500	-0.241
CAR (-3, +3)	0.43%	0.02%	0.1078	482 : 476	1.223
CAR (-1, +1)	0.68%	0.17%	0.0615	499 : 459	3.402***
Panel B (1). Target company from developed countries, N = 669					
CAR (-5, +5)	-0.16%	-0.42%	0.1714	321 : 348	-0.238
CAR (-3, +3)	0.36%	0.05%	0.122	338 : 331	0.755
CAR (-1, +1)	0.85%	0.25%	0.0666	360 : 309	3.285***
Panel B (2). Target company from non developed countries, N = 289					
CAR (-5, +5)	-0.03%	-0.44%	0.0904	137 : 152	-0.051
CAR (-3, +3)	0.59%	-0.04%	0.0639	144 : 145	1.564
CAR (-1, +1)	0.28%	-0.07%	0.0475	139 : 150	1.012
Panel C (1). Government ownership involvement in acquirer company, N = 100					
CAR (-5, +5)	0.21%	0.03%	0.0603	50 : 50	0.348
CAR (-3, +3)	0.44%	0.46%	0.0456	60 : 40	0.969
CAR (-1, +1)	-0.06%	-0.1%	0.0346	48 : 52	-0.179
Panel C (2). Acquirer company doesn't involve government ownership, N = 858					
CAR (-5, +5)	-0.16%	-0.46%	0.1588	408 : 450	-0.288
CAR (-3, +3)	0.42%	-0.06%	0.1128	422 : 436	1.101
CAR (-1, +1)	0.76%	0.2%	0.0639	451 : 407	3.495***
Panel D (1). Acquisition in natural resources related industry, N = 136					
CAR (-5, +5)	1.65%	0.56%	0.105	71 : 65	1.828*
CAR (-3, +3)	1.62%	0.75%	0.071	79 : 57	2.663***
CAR (-1, +1)	0.77%	0.09%	0.0576	69 : 67	1.552
Panel D (2). Acquisition in non-natural resources related industry, N = 822					
CAR (-5, +5)	-0.41%	-0.61%	0.1578	387 : 435	-0.745
CAR (-3, +3)	0.23%	-0.07%	0.1126	403 : 419	0.581
CAR (-1, +1)	0.66%	0.18%	0.0622	430 : 392	3.05***

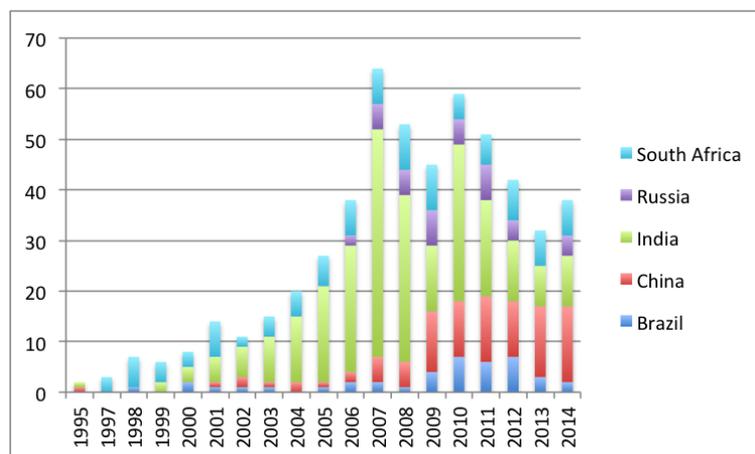
## 5.2. Cross-sectional analysis

The cross-sectional analysis is done based on the subsample of 535 deals. In this subsection, the detailed description regarding the subsample is first presented, followed by the results of the cross-sectional regression analysis.

### 5.2.1. Subsample description

The subsample is obtained through screening the full sample with the different variables that are detailed in the Section 4 Methodology. Due to the data availability, each time a new variable is introduced, the sample size decreases. In this thesis, a total of 14 variables are introduced for the cross-sectional analysis, as a result, a big portion of the original sample is eliminated due to lack of related information. After sorting through the data regarding the 14 variables, a subsample of 535 cross-border acquisition deals is obtained. The number of deals conducted by country and by year can be seen in Table 5 and Figure 3. The number of deals exhibits similar trend as in the full sample: cross-border acquisition deals originated from India composite a major portion of the sample, as well as deals from China since year 2009.

**Figure 3 Number of cross-border acquisitions by country, subsample (N=535).**



In addition to the number of deals, the subsample also contains sufficient information on deal size in terms of transaction value. Table 6 gives more detailed information regarding deal size. As can be seen from the table, during year 2010, the highest total value of cross-border acquisitions deals were announced. This trend was especially noticeable in Brazil and India.

**Table 5 Number of cross-border acquisitions by country and by year, subsample.**

This table contains the subsample of 535 acquisitions, listed by year of announcement and acquirer country, which are used in the cross-sectional analysis.

Year	Brazil	China	India	Russia	South Africa	Total
1995		1	1			2
1997					3	3
1998	1				6	7
1999			2		4	6
2000	2		3		3	8
2001	1	1	5		7	14
2002	1	2	6		2	11
2003	1	1	9		4	15
2004		2	13		5	20
2005	1	1	19		6	27
2006	2	2	25	2	7	38
2007	2	5	45	5	7	64
2008	1	5	33	5	9	53
2009	4	12	13	7	9	45
2010	7	11	31	5	5	59
2011	6	13	19	7	6	51
2012	7	11	12	4	8	42
2013	3	14	8		7	32
2014	2	15	10	4	7	38
Total	41	96	254	39	105	535

Prior to conducting the detailed cross-sectional analysis, event study method is first applied to the subsample data. This can be considered as a robustness checking process, to make sure that the findings from the full sample event study also hold true for the subsample data.

Daily abnormal return analysis can be seen in Table 7. The results are very similar to those observed in the full sample, where the highest average daily abnormal return is seen on the announcement day, at 0.495%. In the subsample, the single highest daily abnormal return is also observed on the announcement day at 27.09%, whereas in the full sample it is found on day +1.

It can be therefore argued, based on the daily abnormal return from both full sample and

**Table 6 Value of cross-border acquisitions by country and by year, subsample.**

This is the subsample analysis of 535 acquisitions by year of announcement and acquirer country, which are used in the cross-sectional analysis. Figures are given in million US dollars.

<b>Year</b>	<b>Brazil</b>	<b>China</b>	<b>India</b>	<b>Russia</b>	<b>South Africa</b>	<b>Total</b>
1995		1	6			8
1997					470	470
1998	79				284	364
1999			2		130	132
2000	573		20		55	648
2001	69	17	39		465	590
2002	90	394	808		6	1 297
2003	12	135	291		60	497
2004		35	154		339	528
2005	13	26	418		638	1 095
2006	402	3 502	1 190	800	660	6 555
2007	400	508	5 641	6 594	348	13 491
2008	4	71	6 486	1 404	492	8 457
2009	624	1 796	489	2 711	870	6 490
2010	4 242	1 727	13 245	2 602	1 203	23 018
2011	315	1 214	1 668	4 163	2 674	10 034
2012	909	446	1 801	3 941	1 433	8 529
2013	157	6 221	250		2 221	8 848
2014	194	3 252	603	3 024	2 637	9 709
<b>Total</b>	<b>8 082</b>	<b>19 344</b>	<b>33 111</b>	<b>25 240</b>	<b>14 986</b>	<b>100 762</b>

subsample, that emerging market acquirers enjoy an average of about 0.5% return on their stock prices on the cross-border acquisition announcements.

Based on the daily abnormal return data, the cumulative abnormal return is calculated from the subsample. In Table 8, the detailed results of subsample event study are shown. Panels E, F, G, H in the subsample correspond to Panels A, B, C, D in the full sample. The results are quite similar to those from full sample. Overall, emerging market acquirers enjoy favorable returns at the announcement of cross-border acquisitions. When emerging market acquirers purchase targets from developed markets, they experience significant positive return compared to those purchase targets from non developed markets. Acquirers without any government ownership

**Table 7 Daily abnormal return, subsample.**

This table presents the daily abnormal return of subsample, N = 535, which are used in the cross-sectional analysis, from day -5 to day +5 around cross-border acquisition announcements by emerging market acquirers. Abnormal returns are presented in percentages. Std dev. is the standard deviation.

Day	Max AR	Min AR	Mean	Median	Std dev.	positive:negative
-5	14.72%	-32.98%	-0.041%	-0.163%	0.02924	253 : 282
-4	20.47%	-30.53%	-0.05%	-0.064%	0.03058	260 : 275
-3	9.00%	-31.11%	-0.018%	-0.085%	0.02727	256 : 279
-2	15.12%	-43.1%	0.041%	-0.175%	0.03396	253 : 282
-1	20.85%	-34.98%	0.118%	-0.123%	0.03627	250 : 285
0	27.09%	-31.62%	0.495%	0.196%	0.03549	278 : 257
1	25.07%	-37.98%	0.076%	-0.068%	0.03459	256 : 279
2	12.64%	-32.04%	-0.174%	-0.309%	0.02932	232 : 303
3	10.46%	-37.79%	-0.076%	-0.209%	0.02992	240 : 295
4	13.78%	-31.76%	-0.231%	-0.249%	0.0313	232 : 303
5	14.65%	-38.87%	-0.289%	-0.226%	0.03232	233 : 302

involvement enjoy significant positive cumulative abnormal return compared to those acquirers with government ownership. Hypotheses 1 and 2 are hence both accepted at subsample level.

Natural resources related acquisitions again show interesting results compared to those of the full sample. In the subsample, although results from Panel H(1) show positive returns from all event windows for acquirers of natural resources related deals, these results lack of statistical significance. On the other hand, acquirers of non natural resources related deals do enjoy a significant positive cumulative abnormal return during event window day -1 to day +1. This result is in line with the expectation, and Hypothesis 3 is accepted based on the subsample analysis.

One thing to note is that the subgroup samples for Panel G(1) and Panel H(1) are much smaller compared to the other panels, both below 100, so it lacks the desired statistical significance, though it gives some information on the general trend. Overall, the event study result of the subsample confirms the earlier results from the full sample. So it can be said that the event study results are reliable.

**Table 8 Cumulative abnormal return, subsample.**

This table shows the cumulative abnormal return of subsample, N = 535, which are used in the cross-sectional analysis, during announcement period of cross-border acquisitions by emerging market companies. Panel E contain all 535 deals of subsample, Panel F divides the subsample by whether the target company is from developed countries or not, Panel G divides the subsample by whether the acquirer has government ownership, and Panel H divides the subsample by whether the target company is in natural resources related industries. CAR (-5, +5), CAR (-3, +3), CAR (-1, +1) are the cumulative abnormal returns of the corresponding event windows. Std dev. is the standard deviation. Natural resource related industry refers to either Mining industry or Oil and Gas; Petroleum Refining industry. Cumulative abnormal returns are presented in percentages. \* Cumulative abnormal return is significant at the 0.10 level (2-tailed). \*\* Cumulative abnormal return is significant at the 0.05 level (2-tailed). \*\*\* Cumulative abnormal return is significant at the 0.01 level (2-tailed).

Event window	Mean	Median	Std dev.	positive : negative	t test
Panel E. Subsample of data included in cross-sectional analysis, N = 535					
CAR (-5, +5)	-0.15%	-0.32%	0.1881	258 : 277	-0.183
CAR (-3, +3)	0.46%	0.24%	0.1306	275 : 260	0.819
CAR (-1, +1)	0.69%	0.18%	0.0719	279 : 256	2.215**
Panel F (1). Subsample, target company from developed countries, N = 394					
CAR (-5, +5)	-0.24%	-0.36%	0.213	190 : 204	-0.22
CAR (-3, +3)	0.5%	0.36%	0.1485	209 : 185	0.673
CAR (-1, +1)	0.9%	0.25%	0.078	211 : 183	2.295**
Panel F (2). Subsample, target company from non developed countries, N = 141					
CAR (-5, +5)	0.09%	-0.16%	0.0868	68 : 73	0.128
CAR (-3, +3)	0.35%	-0.13%	0.0564	66 : 75	0.734
CAR (-1, +1)	0.09%	-0.15%	0.0512	68 : 73	0.22
Panel G (1). Subsample, government ownership involvement in acquirer company, N = 56					
CAR (-5, +5)	0.52%	-0.62%	0.0655	26 : 30	0.591
CAR (-3, +3)	0.51%	0.36%	0.0485	32 : 24	0.788
CAR (-1, +1)	-0.21%	-0.02%	0.0364	27 : 29	-0.442
Panel G (2). Subsample, acquirer company doesn't involve government ownership, N = 479					
CAR (-5, +5)	-0.23%	-0.32%	0.1975	232 : 247	-0.252
CAR (-3, +3)	0.46%	0.18%	0.1371	243 : 236	0.729
CAR (-1, +1)	0.79%	0.23%	0.075	252 : 227	2.32**
Panel H (1). Subsample, acquisition in natural resources related industry, N = 86					
CAR (-5, +5)	1.84%	0.67%	0.0995	45 : 41	-1.256
CAR (-3, +3)	1.88%	0.75%	0.0632	50 : 36	0.193
CAR (-1, +1)	0.62%	0.17%	0.064	46 : 40	1.004
Panel H (2). Subsample, acquisition in non-natural resources related industry, N = 449					
CAR (-5, +5)	-0.53%	-0.48%	0.2005	213 : 236	0.025
CAR (-3, +3)	0.19%	0.05%	0.1398	225 : 224	0.796
CAR (-1, +1)	0.7%	0.18%	0.0734	233 : 216	2.026**

### 5.2.2. Cross-sectional regression results

The cross-sectional regression results are presents in three parts, first of all, a brief descriptive statistics of the different variables; secondly, the correlation check of the variables; and finally, the results of the regression of several models.

Table 9 shows the descriptive statistics of variables. It can be seen that most of the cross-border acquisitions are conducted in the related industry. In most deals, the acquirer purchases majority of the target ownership. This reflects the argument from previous literature (Gubbi et al., 2010) that the advantage of access to strategically import assets is very crucial and only majority ownership would guarantee such access. The averages of target economic status (TECOSTATUS) and institutional distance (INSTDIST) variables are reasonably high, meaning that emerging market acquirers are more drawn to the targets from advanced economies or relatively higher institutional distance.

**Table 9 Descriptive statistics of variables.**

INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitablization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. Std dev. is the standard deviation.

Variables	N	Minimum	Maximum	Mean	Std dev.
INDUSTRY	535	0	1	0.59	0.492
OWNERSHIP	535	0	1	0.78	0.418
TSTATUS	535	0	1	0.41	0.493
CASHPMNT	535	0	1	0.35	0.476
AGOVN	535	0	1	0.1	0.306
TGOVN	535	0	1	0.04	0.194
ACQAGE	535	2	203	30.9	28.326
DEALSIZE	535	-12.27	2.09	-3.6	2.111
NATRES	535	0	1	0.16	0.368
TECOSTATUS	535	0	1	0.74	0.441
INSTDIST	535	0	1	0.89	0.311
ECODIST	535	-10155.07	103241.17	29423.55	19261.785
CULDIST	475	14.18	101.8	52.71	19.751

**Table 10 Correlation of variables.**

INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitablization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. CAR(-1,+1) is the cumulative abnormal return from 3 day event window. N = 535 for variables CAR(-1,+1), INDUSTRY, OWNERSHIP, TSTATUS, CASHPMNT, AGOVN, TGOVN, ACQAGE, DEALSIZE, NATRES, TECOSTATUS, INSTDIST, and ECODIST. N = 475 for variable CULDIST. \* Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).

Variables	01	02	03	04	05	06	07	08	09	10	11	12	13	14
01. CAR (-1, +1)	1													
02. INDUSTRY	-0.031	1												
03. OWNERSHIP	0.014	0.017	1											
04. TSTATUS	0.063	-0.043	0.142**	1										
05. CASHPMNT	0.026	-0.066	0.08	-0.091*	1									
06. AGOVN	-0.043	0.086*	-0.138**	-0.188**	-0.018	1								
07. TGOVN	0.013	0.031	0.039	-0.170**	-0.026	0.277**	1							
08. ACQAGE	0.006	0.061	-0.027	-0.019	-0.006	0.035	-0.111*	1						
09. DEALSIZE	0.083	-0.062	0.213**	0.078	-0.019	-0.219**	-0.051	-0.118**	1					
10. NATRES	-0.012	-0.039	-0.009	-0.016	0.013	-0.033	-0.036	-0.038	-0.038	1				
11. TECOSTATUS	0.049	-0.092*	0.014	0.028	0.051	-0.128**	-0.098*	-0.099*	0.151**	0.031	1			
12. INSTDIST	0.044	-0.021	0.058	0.061	-0.012	-0.116**	-0.115**	-0.163**	0.089*	0.022	0.528**	1		
13. ECODIST	0.041	-0.106*	0.031	0.043	0.068	-0.149**	-0.129**	-0.071	0.181**	-0.033	0.782**	0.521**	1	
14. CULDIST	0.023	-0.004	-0.026	-0.004	0.064	0.144**	0.117*	-0.200**	-0.02	-0.003	0.262**	0.150**	0.344**	1

Table 10 presents the correlation among all variables. As can be seen in the table, some of the variables, such as acquirer's government ownership involvement (AGOVN), target economic status (TECOSTATUS), economic distance (ECODIST) etc, have strong correlations with many other variables. It is therefore important to further define different models of the subsample prior to conduct the cross-sectional analysis.

To reduce collinearity and achieve more accurate result, based on the correlation analysis, the cross-sectional analysis is constructed by using six different models. Model 1 uses the variables of industry relatedness (INDUSTRY), majority ownership (OWNERSHIP), target status (TSTATUS), cash payment (CASHPMNT), target government involvement (TGOVN), acquirer age (ACQAGE), relative deal size (DEALSIZE), and natural resources relatedness (NATRES) to run the ordinary least square (OLS) regression. Model 2 through 6 each introduces one additional variable: acquirer government involvement (AGOVN), target economic status (TECOSTATUS), institutional distance (INSTDIST), economic distance (ECODIST), and cultural distance (CULDIST) respectively. It is to be noted that the cultural distance (CULDIST) data is only available for 475 deals out of the 535 subsample acquisitions. Detailed information on the data size of different models can be found in Table 12.

In order to make sure that collinearity is not a problem for the current six-model-setup in the cross-sectional regression analysis, variance inflation factor (VIF) is calculated for all six models. As can be seen in Table 11, the VIF values are around 1, which means that there is no collinearity problem in the analysis.

The final results of the cross-sectional regression analysis are presented in Table 12. It is to be noted that only one variable returns statistically significant result, the relative deal size (DEALSIZE), which is positively related to acquirer return. This result confirms that findings from the previous study by Bhagat et al. (2011), which shows relative size and acquirer return have a significant positive correlation.

Other results from cross-sectional regression, though not significant, still provide some interesting perspectives. As shown in the results, acquirer's government ownership involvement (AGOVN) has negative impact on the acquirer return. This result is in line with previous studies by Chen and Young (2010) and it is also in line with the findings from the event study. Target economic status (TECOSTATUS) and institutional distance (INSTDIST) both have positive

**Table 11 Collinearity check of cross-sectional regression.**

Variance inflation factor (VIF) is used as an indicator of collinearity. VIF values being around 1 indicate that there is no inter-correlation between the predictors. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitablization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		1.176				
TECOSTATUS			1.051			
INSTDIST				1.054		
ECODIST					1.069	
CULDIST						1.06
(Constant)						
INDUSTRY	1.017	1.021	1.022	1.017	1.025	1.019
OWNERSHIP	1.084	1.095	1.084	1.086	1.084	1.126
TSTATUS	1.072	1.088	1.072	1.072	1.072	1.091
CASHPMNT	1.027	1.027	1.029	1.027	1.031	1.039
TGOVN	1.058	1.133	1.067	1.076	1.074	1.051
ACQAGE	1.035	1.036	1.043	1.065	1.039	1.078
DEALSIZE	1.076	1.11	1.095	1.079	1.104	1.105
NATRES	1.007	1.008	1.008	1.007	1.009	1.012

influence on the acquirer return. This is as expected based on the earlier study by Gubbi et al. (2010), as these two variables are closely related to each other and they have positive effects on acquirer return. Gubbi et al. (2010) also find positive correlation between economic distance (ECODIST) and acquirer return, however, the empirical result in this thesis find no evidence of any kind of relationship between the two. The empirical result on cultural distance (CULDIST) shows that it has barely any impact on the acquirer return at all, this is similar to the result found by Nicholson and Salaber (2013). It can be argued that the cultural distance variable used in this test utilizes the cultural difference at national level, however, there is also the corporate level cultural difference at play. Hence it might be more informative to find a way to include corporate cultural difference between acquirer and target in other new studies.

Interestingly, industry relatedness (INDUSTRY) and majority ownership (OWNERSHIP) both reduce acquirer returns, which are contradictory to prior studies and expectations, as Gubbi et al. (2010); Singh and Montgomery (1987) argue that these two variables positively impact the acquirer return. Target's private status (TSTATUS) is positively related to acquirer return, this is in line with the findings from Capron and Shen (2007). Acquirer return also benefits from full cash payment (CASHPMNT). Target's government ownership involvement (TGOVN) positively influence the acquirer return, which is the opposite compared to the acquirer's government ownership involvement. Although Sapienza et al. (2006) argue that early stage internationalization benefits acquiring companies, there is no evidence found in relation to the acquirer age (ACQAGE) in this study. Natural resources (NATRES) relatedness negatively impact the acquirer return in all models except the model 6, in which the cultural distance is introduced. This is arguably different to the findings from the event study, where there is lack of evidence that acquirers of natural resources related deals suffer from lower acquirer returns. It could be that there are other elements in play in the natural resources related acquisitions that influence that cumulative abnormal return in the event study.

The above mentioned variables, although they show either positive or negative relationship to the acquirer return, none but one shows any statistical significance. The only variable that constantly shows statistical significance across all models is the relative deal size (DEALSIZE). The bigger the transaction value relative to the acquirer's capitalization, the higher return the acquirer experiences. This result is consistent with the prior study by Bhagat et al. (2011).

**Table 12 Results of cross-sectional regression.**

Cumulative abnormal return during 3 day event window, CAR(-1, +1), is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitalization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. \* Regression coefficient is significant at the 0.10 level (2-tailed).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		-0.006 (-0.547)				
TECOSTATUS			0.0063 (0.871)			
INSTDIST				0.01 (0.975)		
ECODIST					0,0000 (0.585)	
CULDIST						0.0001 (0.492)
(Constant)	0.0136 (1.252)	0.0139 (1.281)	0.0078 (0.61)	0.004 (0.273)	0.0099 (0.785)	0.0087 (0.576)
INDUSTRY	-0.0033 (-0.518)	-0.0031 (-0.482)	-0.0029 (-0.454)	-0.0033 (-0.514)	-0.003 (-0.465)	-0.0042 (-0.615)
OWNERSHIP	-0.0029 (-0.369)	-0.0033 (-0.421)	-0.0028 (-0.355)	-0.0032 (-0.412)	-0.0028 (-0.366)	-0.0031 (-0.363)
TSTATUS	0.0098 (1.501)	0.0094 (1.423)	0.0098 (1.497)	0.0097 (1.478)	0.0098 (1.494)	0.0117* (1.653)
CASHPMNT	0.0052 (0.792)	0.0052 (0.783)	0.005 (0.749)	0.0054 (0.808)	0.005 (0.752)	0.0045 (0.634)
TGOVN	0.0124 (0.75)	0.0148 (0.864)	0.0137 (0.828)	0.0144 (0.868)	0.0136 (0.815)	0.0156 (0.771)
ACQAGE	0.0001 (0.506)	0.0001 (0.525)	0.0001 (0.581)	0.0001 (0.663)	0.0001 (0.542)	0.0001 (0.539)
DEALSIZE	0.0029* (1.885)	0.0027* (1.759)	0.0027* (1.751)	0.0028* (1.834)	0.0027* (1.767)	0.0029* (1.722)
NATRES	-0.0014 (-0.166)	-0.0016 (-0.183)	-0.0016 (-0.189)	-0.0015 (-0.179)	-0.0012 (-0.143)	0.0007 (0.076)
R <sup>2</sup>	0.013	0.014	0.015	0.015	0.014	0.015
N	535	535	535	535	535	475

### 5.2.3. *Robustness check and country level analysis*

In an effort to further understand the potential differences among the selected countries, as well as test the robustness of the results, event study analysis and cross-sectional analysis are carried out at country level samples. As mentioned earlier, the number of deals varies greatly among the countries, few countries have very small sample size for the cross-sectional analysis (e.g. Brazil: 41; Russia: 39), hence the result lacks statistical significance. The results of these country level analysis are presented in Section Appendices as a complimentary part of this study. However, they do shed some light in further understanding of the country level differences.

The event study results are shown in Appendices B and C. In the full sample analysis, Indian acquirers enjoy significant positive returns from cross-border acquisition announcements during the 3-day event window, while the Chinese acquirers benefit from significant positive returns during the 3-day and 7-day event windows. In the subsample analysis, both Chinese and South African acquirers get significant positive returns during 7-day and 11-day event windows, and the average cumulative abnormal returns are well over 1%. In all other cases, emerging market acquirers don't seem to enjoy significant positive returns from cross-border acquisition announcements.

The cross-sectional regression results are shown in Appendices D to H. In case of Brazil, none of the variables has any significant correlation with the acquirer return. For Chinese acquirers, their return is positively correlated to purchase of majority ownership (OWNERSHIP), acquirer age (ACQAGE), and relative deal size (DEALSIZE). Relative deal size (DEALSIZE) also positively impact Indian acquirers' returns in two models. In case of Russian acquirers, their return is negatively correlated to acquirer age (ACQAGE). South African acquirers' return would be reduced if they purchase majority ownership (OWNERSHIP).

As can be seen from the results, some variables can present totally opposite coefficients among different countries. Take purchase of majority ownership (OWNERSHIP) for example, it benefits the Chinese acquirers while hurting the South African ones. Another example is the acquirer age (ACQAGE), which is positively related to Chinese acquirer's return but is negatively related to Russian acquirer's return. That is, Russian acquirers benefit from early

stage of internationalization, while the stock market rewards more seasoned Chinese acquirers than younger ones. This also provides some underlying reasons as to why in the earlier analysis (Table 12) only one variable has shown statistical significance. Due to the counter effect from country level data, the overall result can be either diluted and skewed.

Another important thing to note is that the R square value from the regression analysis is improved by big margins when conducting country level analysis compared to the total sample analysis. It is therefore suggested that this kind of country comparison research can be an interesting topic for future studies.

### *5.3. Results summary and limitations*

In Section 2.5 Hypotheses, a total of eight hypotheses, including five sub-hypotheses, are introduced. The event study provides answers to the first three hypotheses, while the cross-sectional regression analysis provides answers to the remaining five. According to the event study results from both the full sample and the subsample, emerging market acquirers enjoys significant positive returns when the target companies originate from developed markets, consistent with the prior study by Gubbi et al. (2010). Another confirmation of the hypotheses is that emerging market acquirers experience significant positive returns when the acquirers themselves don't have government ownership involvement, in line with the earlier findings from Chen and Young (2010). These two findings are based on the results from 3-day event window  $CAR(-1, +1)$  mean that the Hypothesis 1 and Hypothesis 2 are both accepted. The test results of Hypothesis 3, however, presented mixed results. In the full sample analysis, the emerging market acquirers of both natural resources related deals and non natural resource related deals experience positive abnormal returns, though during different event windows, thus, rejecting Hypothesis 3. On the other hand, subsample event study results accept Hypothesis 3, that emerging market acquirers of non natural resources related targets enjoy positive returns during 3-day event window  $CAR(-1, +1)$ .

The five sub-hypothesis of Hypothesis 4 are tested using the cross-sectional regression analysis. The only one being accepted is Hypothesis 4d, that relative deal size of the acquisition transaction to the acquirer's market capitalization is positively related to the acquirer return, which is consistent with the previous study by Bhagat et al. (2011). Hypothesis 4a and 4c are

both rejected, as economic distance and cultural distance don't produce any significant result. The remaining two Hypothesis 4b and 4e are both supported, that the institutional distance and target company's private status are positively related to the acquirer return. However, these two sub-hypotheses cannot be accepted fully as the support shown in the test results is not statistically significant.

Table 13 summarizes the test results of the hypotheses. It is to be noted that results are based on the cumulative abnormal return from 3-day event window  $CAR(-1, +1)$  unless otherwise clarified.

**Table 13 Results summary.**

This table summarized the results of the hypotheses tested in this thesis. Results are based on cumulative abnormal return from 3-day event window  $CAR(-1, +1)$  unless otherwise clarified.

Hypotheses	Statements	Results	Explanations
H.1	Emerging market acquirers enjoy positive abnormal returns when the target company is from an advanced economy.	Accepted	
H.2	Emerging market acquirers enjoy positive abnormal returns if there is no government ownership involved.	Accepted	
H.3	Emerging market acquirers enjoy positive abnormal returns from non-natural resources related acquisitions.	Mixed	Accepted at full sample and subsample level analysis for 3-day event window $CAR(-1, +1)$ , but rejected at full sample level analysis for 7-day and 11-day event windows $CAR(-3, +3)$ and $CAR(-5, +5)$ .
H.4a	Economic distance is positively related to acquirer's abnormal return.	Rejected	
H.4b	Institutional distance is positively related to acquirer's abnormal return.	Supported	The hypothesis is supported, however, there is no statistical significance.
H.4c	Cultural distance is negatively related to acquirer's abnormal return.	Rejected	
H.4d	Relative deal size is a positive predictor of acquirer's abnormal return.	Accepted	
H.4e	Private target status positively influences acquirer's abnormal return.	Supported	The hypothesis is supported, however, there is no statistical significance.

The results of this study are not without limitations. First of all, the country selection of Brazil, Russia, India, China, and South Africa are not evenly distributed among the sample. Looking at the sample data description (Figure 1 and Figure 3), it is obvious that cross-border

acquisition deals are dominated by Indian acquirers in both the full sample and the subsample, especially prior to year 2008. From year 2009 onwards, the number of deals originated from China started to grow at a fast speed. Overall, deals by Indian and Chinese acquirers make up the majority of the sample data, which means there can be a bias in the results towards those two countries, especially India. Another limitation to note is the country specific characters in play. The five selected countries represent markets of vast geographical and cultural differences, while such selection ensures a good level of diversity of the sample, it also poses the challenge of contradictory characteristics. A country level comparison study is therefore suggested for future studies.

## 6. Conclusion

Since the fifth merger wave, the world has seen a sharp increase in cross-border acquisitions (Hitt et al., 2001). While the developed market acquirers started the trend, the emerging market acquirers have been catching up at a fast speed. Since the early 2000s, both the number of deals and the deal values by emerging market acquirers have experienced significant growth. A common question being asked is whether these cross-border acquisitions benefit the acquirer in terms of company value.

There have been extensive academic studies on the acquirer return at the acquisition announcement by emerging market acquirers, with varying results. Majority of the studies concentrate on one single market. Such as the ones conducted by Gubbi et al. (2010) and Ning et al. (2014). Gubbi et al. (2010) study 425 cross-border acquisitions conducted by Indian companies from 2000 to 2007 and find significant positive abnormal returns. Ning et al. (2014) use 335 deals by Hong Kong Stock Exchange listed Chinese acquirers between 1991 and 2010 and show positive stock price reaction on average. There are few articles that provide a wider view of emerging markets. Aybar and Ficici (2009) examine 433 cross-border deals mainly from Asian countries between 1991 and 2004, and show value destruction in over half of the sample. Bhagat et al. (2011) test 698 acquisitions made by emerging market companies between 1991 and 2008 and find significant positive market response on the announcement day. Although overall there is a lack of evidence from multi-country data.

This thesis studies sample data from five major emerging markets: Brazil, Russia, India, China, and South Africa (the BRICS countries), in order to shed some light into the study of acquirer return in the overall emerging market environment. The data covers cross-border acquisitions during the time period from January 1, 1995 to December 31, 2014. Acquisition related data is retrieved from Thomson Financial Securities Data Company (SDC) and Thomson One systems. Using publicly listed acquiring company, sufficient stock price data, and single acquisition announcement by the same acquirer during the event window as the criteria, a full sample of 958 deals is obtained. The event study methodology and cross-sectional regression analysis are used in the empirical tests to answer a list of research questions regarding the parameters and predictors that can influence the acquirer return. The event study is carried out using cumulative abnormal returns from three sets of event windows: 3-day event window

CAR(-1, +1), 7-day event window CAR(-3, +3), and 11-day event window CAR(-5, +5). For the cross-sectional regression analysis, a total of 14 variables are introduced, which lead to a reduced subsample of 535 deals.

The event study results shows that, emerging market acquirers enjoys significant positive returns during 3-day event window when the target companies are from developed markets. This result is consistent with the findings from Gubbi et al. (2010). Additionally, emerging market acquirers experience significant positive returns during 3-day event window when the acquirers themselves don't have government ownership involvement, which is in line with the results from Chen and Young (2010). Prior studies also suggest that there is a strong presence of government ownership in natural resources related industries (Deng and Yang, 2015), thus, it is expected that acquirers of non natural resources related deals benefit from positive return. When comparing acquirer returns using natural resources related acquisition as a parameter however, mixed results are observed: emerging market acquirers of non natural resources related deals enjoy significant positive returns from 3-day event window (observed from both full sample and subsample), while acquirers of natural resources related deals enjoy significant positive returns from 7-day and 11-day event windows (observed from only full sample). There is a lack of similar finding from prior studies, except that an earlier study by Nicholson and Salaber (2013) show that Chinese manufacturing companies benefit from positive returns when announcing natural resources related acquisitions. Government ownership and natural resources relatedness are two aspects that haven't been studies much using multi-country data. The analysis in this thesis definitely show some interesting results of these two items, especially considering the mixed results from natural resources relatedness, which can be recommended for future studies.

Cross-sectional analysis is performed on the subsample of 535 cross-border acquisitions with the introduction of the following different independent variables: industry relatedness, acquirer's level of ownership after acquisition, target's private status, cash payment, acquirer's government ownership involvement, target's government ownership involvement, acquirer age, relative deal size, natural resources related deal, target country's economic status, institutional distance, economic distance, cultural distance. The dependent variable used is the cumulative abnormal return from 3-day event window CAR(-1, +1). The results from cross-sectional regression analysis show varying correlations between different variables and acquirer return, however, only one of them has statistical significance: relative deal size. Obtained through

calculating the ratio of the acquisition transaction value to the acquirer's market capitalization, relative deal size positively influences the acquirer return. This result is consistent with the earlier study by Bhagat et al. (2011).

The results of this thesis suffer from certain limitations. These limitations are mainly caused by the country selection. Brazil, Russia, India, China, and South Africa are five major emerging markets, which provide a good level of diversity for this study. However, the distribution of cross-border acquisitions are not even among the five selected countries, India has the highest number of cross-border acquisitions among all five countries, that is, the data from India will have the highest impact towards the final result. In addition, country diversity means that there are country specific characteristics which can affect the results. A comparative study can be suggested as a possible solution to overcome these limitations. However, due to the lack of sample data from a few countries, it is not possible to carry out a comprehensive comparative study in this thesis, though a high level comparison is performed and results shown in Appendices. Based on the comparison results, it can be observed that some variables have varying level of influence and can have contradictory effects on deals from different countries, which means that the overall multi-country analysis results can be biased. Therefore, further studies can be suggested in the form of comparative study.

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## Appendices

### Appendix A List of developed countries / regions.

This list of developed countries / regions is used as the basis of defining target country's economic status in this thesis. This list is obtained based on IMF's definition of developed countries and regions.

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Australia	France	Latvia	Slovakia
Austria	Germany	Luxembourg	Slovenia
Belgium	Greece	Malta	South Korea
Canada	Hong Kong	Netherlands	Spain
Cyprus	Iceland	New Zealand	Sweden
Czech Republic	Ireland	Norway	Switzerland
Denmark	Israel	Portugal	Taiwan
Estonia	Italy	San Marino	United Kingdom
Finland	Japan	Singapore	United States

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### Appendix B Cumulative abnormal return by acquirer country, full sample.

This table shows the cumulative abnormal return of full sample, N = 958, by acquirer country, during announcement period of cross-border acquisitions by emerging market companies.

CAR (-5, +5), CAR (-3, +3), CAR (-1, +1) are the cumulative abnormal returns of the corresponding event windows. Std dev. is the standard deviation. Natural resource related industry refers to either Mining industry or Oil and Gas; Petroleum Refining industry.

Cumulative abnormal returns are presented in percentages. \* Cumulative abnormal return is significant at the 0.10 level (2-tailed). \*\* Cumulative abnormal return is significant at the 0.05 level (2-tailed). \*\*\* Cumulative abnormal return is significant at the 0.01 level (2-tailed).

Event window	Mean	Median	Std dev.	positive : negative	t test
Brazil, N = 65					
CAR (-5, +5)	0.23%	-0.14%	0.0618	32 : 33	0.301
CAR (-3, +3)	0.6%	0.28%	0.0477	34 : 31	1.006
CAR (-1, +1)	-0.02%	-0.07%	0.033	28 : 37	-0.037
Russia, N = 110					
CAR (-5, +5)	-1.17%	-0.74%	0.1094	48 : 62	-1.123
CAR (-3, +3)	-0.52%	-0.37%	0.077	51 : 59	-0.714
CAR (-1, +1)	-0.06%	-0.44%	0.0563	47 : 63	-0.113
India, N = 493					
CAR (-5, +5)	-0.48%	-0.51%	0.1934	236 : 257	-0.547
CAR (-3, +3)	0.34%	-0.46%	0.1336	231 : 262	0.571
CAR (-1, +1)	0.94%	0.36%	0.0706	271 : 222	2.944***
China, N = 135					
CAR (-5, +5)	1.01%	-0.88%	0.0831	63 : 72	1.418
CAR (-3, +3)	1.17%	0.56%	0.0684	79 : 56	1.98**
CAR (-1, +1)	0.71%	0.23%	0.0457	75 : 60	1.817*
South Africa, N = 155					
CAR (-5, +5)	0.64%	0.08%	0.0823	79 : 76	0.962
CAR (-3, +3)	0.65%	0.53%	0.0764	87 : 68	1.053
CAR (-1, +1)	0.63%	0.01%	0.0546	78 : 77	1.429

### Appendix C Cumulative abnormal return by acquirer country, subsample.

This table shows the cumulative abnormal return of subsample, N = 535, that is used in the cross-sectional regression analysis, by acquirer country, during announcement period of cross-border acquisitions by emerging market companies. CAR (-5, +5), CAR (-3, +3), CAR (-1, +1) are the cumulative abnormal returns of the corresponding event windows. Std dev. is the standard deviation. Natural resource related industry refers to either Mining industry or Oil and Gas; Petroleum Refining industry. Cumulative abnormal returns are presented in percentages. \* Cumulative abnormal return is significant at the 0.10 level (2-tailed). \*\* Cumulative abnormal return is significant at the 0.05 level (2-tailed). \*\*\* Cumulative abnormal return is significant at the 0.01 level (2-tailed).

Event window	Mean	Median	Std dev.	positive : negative	t test
Brazil, N = 41					
CAR (-5, +5)	0.81%	0.16%	0.0546	21 : 20	0.947
CAR (-3, +3)	0.62%	-0.22%	0.0446	20 : 21	0.885
CAR (-1, +1)	-0.16%	-0.15%	0.0314	17 : 24	-0.318
Russia, N = 39					
CAR (-5, +5)	-1.57%	-1.34%	0.138	13 : 26	-0.711
CAR (-3, +3)	-0.73%	-0.95%	0.0718	17 : 22	-0.636
CAR (-1, +1)	0.14%	-0.4%	0.0785	16 : 23	0.113
India, N = 254					
CAR (-5, +5)	-1.47%	-0.7%	0.2561	115 : 139	-0.916
CAR (-3, +3)	-0.3%	-0.66%	0.1722	115 : 139	-0.275
CAR (-1, +1)	0.81%	0.4%	0.0858	142 : 112	1.495
China, N = 96					
CAR (-5, +5)	1.89%	-0.05%	0.0923	48 : 48	2.006**
CAR (-3, +3)	1.66%	0.63%	0.077	56 : 40	2.112**
CAR (-1, +1)	0.86%	0.19%	0.0506	51 : 45	1.658
South Africa, N = 105					
CAR (-5, +5)	1.34%	0.84%	0.0712	61 : 44	1.931*
CAR (-3, +3)	1.59%	1.14%	0.0833	67 : 38	1.951*
CAR (-1, +1)	0.79%	0.01%	0.0603	53 : 52	1.338

### Appendix D Results of cross-sectional regression, Brazil.

Cumulative abnormal return during 3 day event window, CAR(-1, +1), is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitalization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		-0.0096 (-0.619)				
TECOSTATUS			-0.0025 (-0.193)			
INSTDIST				0.0114 (0.809)		
ECODIST					0,0000 (-0.123)	
CULDIST						-0.0001 (-0.424)
(Constant)	-0.0063 (-0.281)	-0.012 (-0.488)	-0.0062 (-0.272)	-0.0111 (-0.475)	-0.0056 (-0.239)	-0.0134 (-0.498)
INDUSTRY	-0.0079 (-0.569)	-0.0046 (-0.312)	-0.0069 (-0.464)	-0.0112 (-0.771)	-0.0079 (-0.565)	0.0009 (0.061)
OWNERSHIP	-0.0146 (-1.234)	-0.0134 (-1.107)	-0.0148 (-1.226)	-0.0135 (-1.122)	-0.0148 (-1.22)	-0.0148 (-1.166)
TSTATUS	0.0153 (1.172)	0.0133 (0.983)	0.0149 (1.106)	0.0152 (1.162)	0.0154 (1.16)	0.0123 (0.874)
CASHPMNT	-0.0196 (-1.22)	-0.0195 (-1.207)	-0.0177 (-0.929)	-0.0228 (-1.373)	-0.0184 (-0.977)	-0.0103 (-0.539)
TGOVN	0.0169 (0.507)	0.022 (0.633)	0.0185 (0.53)	0.0148 (0.438)	0.0182 (0.513)	0.0229 (0.649)
ACQAGE	0.000 (-0.017)	0.000 (0.194)	0.000 (-0.005)	0.000 (0.273)	0.000 (-0.004)	0.000 (0.104)
DEALSIZE	-0.004 (-1.202)	-0.0049 (-1.338)	-0.004 (-1.183)	-0.0031 (-0.883)	-0.004 (-1.173)	-0.0043 (-1.217)
NATRES	0.0005 (0.031)	-0.0015 (-0.095)	0.001 (0.064)	0.0017 (0.113)	0.0002 (0.01)	0.0042 (0.266)
R <sup>2</sup>	0.148	0.158	0.149	0.165	0.148	0.163
N	41	41	41	41	41	37

### Appendix E Results of cross-sectional regression, China.

Cumulative abnormal return during 3 day event window,  $CAR(-1, +1)$ , is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitalization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. \* Regression coefficient is significant at the 0.10 level (2-tailed). \*\* Regression coefficient is significant at the 0.05 level (2-tailed). \*\*\* Regression coefficient is significant at the 0.01 level (2-tailed).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		0.012 (0.905)				
TECOSTATUS			0.0121 (0.652)			
INSTDIST				-0.0021 (-0.07)		
ECODIST					0,0000 (0.028)	
CULDIST						0.0001 (0.363)
(Constant)	-0.0025 (-0.158)	-0.0062 (-0.381)	-0.0159 (-0.613)	-0.0004 (-0.013)	-0.0029 (-0.136)	-0.008 (-0.415)
INDUSTRY	-0.0064 (-0.61)	-0.006 (-0.571)	-0.0048 (-0.449)	-0.0064 (-0.61)	-0.0063 (-0.593)	-0.0041 (-0.384)
OWNERSHIP	0.0181* (1.719)	0.0196* (1.835)	0.0186* (1.754)	0.0181* (1.71)	0.0181* (1.703)	0.02* (1.869)
TSTATUS	0.0162 (1.32)	0.0176 (1.421)	0.0161 (1.306)	0.0162 (1.304)	0.0162 (1.313)	0.0142 (1.138)
CASHPMNT	-0.0099 (-0.965)	-0.0103 (-1.003)	-0.0095 (-0.924)	-0.0099 (-0.961)	-0.0099 (-0.958)	-0.0127 (-1.217)
TGOVN	-0.0048 (-0.255)	-0.0091 (-0.465)	-0.001 (-0.049)	-0.0051 (-0.262)	-0.0047 (-0.239)	0.0068 (0.341)
ACQAGE	0.0021*** (2.749)	0.0022*** (2.854)	0.0021*** (2.735)	0.0021*** (2.731)	0.0021*** (2.729)	0.0023*** (2.937)
DEALSIZE	0.0059** (2.143)	0.0061** (2.224)	0.0057** (2.048)	0.0059** (2.132)	0.0059** (2.131)	0.0063** (2.29)
NATRES	0.0115 (0.845)	0.0122 (0.896)	0.0114 (0.838)	0.0115 (0.843)	0.0115 (0.841)	0.0124 (0.882)
R <sup>2</sup>	0.161	0.169	0.166	0.161	0.161	0.189
N	96	96	96	96	96	93

### Appendix F Results of cross-sectional regression, India.

Cumulative abnormal return during 3 day event window, CAR(-1, +1), is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitalization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. \* Regression coefficient is significant at the 0.10 level (2-tailed).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		-0.0197 (-0.661)				
TECOSTATUS			0.0099 (0.76)			
INSTDIST				0.0135 (0.538)		
ECODIST					0,0000 (0.602)	
CULDIST						0.0007 (1.088)
(Constant)	0.0188 (0.924)	0.0202 (0.985)	0.0102 (0.437)	0.0058 (0.182)	0.0106 (0.431)	-0.0146 (-0.347)
INDUSTRY	-0.0102 (-0.919)	-0.0092 (-0.828)	-0.0099 (-0.895)	-0.0099 (-0.895)	-0.0095 (-0.855)	-0.0101 (-0.84)
OWNERSHIP	-0.0042 (-0.258)	-0.0069 (-0.413)	-0.0044 (-0.272)	-0.0046 (-0.283)	-0.004 (-0.247)	-0.0062 (-0.327)
TSTATUS	0.0157 (1.407)	0.0157 (1.402)	0.0161 (1.439)	0.0159 (1.418)	0.016 (1.425)	0.0181 (1.481)
CASHPMNT	0.0118 (1.005)	0.012 (1.015)	0.0114 (0.962)	0.0111 (0.934)	0.0115 (0.976)	0.0113 (0.881)
TGOVN	0.0204 (0.513)	0.0239 (0.595)	0.0242 (0.603)	0.0226 (0.564)	0.0236 (0.588)	0.0278 (0.602)
ACQAGE	0,0000 (0.015)	0,0000 (0.083)	0,0000 (0.055)	0,0000 (0.072)	0,0000 (0.053)	0,0000 (-0.104)
DEALSIZE	0.0045* (1.668)	0.0043 (1.577)	0.0043 (1.569)	0.0045 (1.649)	0.0043 (1.563)	0.0053* (1.724)
NATRES	-0.002 (-0.125)	-0.0022 (-0.138)	-0.0023 (-0.144)	-0.0019 (-0.119)	-0.0017 (-0.107)	-0.0012 (-0.068)
R <sup>2</sup>	0.027	0.028	0.029	0.028	0.028	0.034
N	254	254	254	254	254	234

### Appendix G Results of cross-sectional regression, Russia.

Cumulative abnormal return during 3 day event window, CAR(-1, +1), is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitablization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. \* Regression coefficient is significant at the 0.10 level (2-tailed). \*\* Regression coefficient is significant at the 0.05 level (2-tailed).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		-0.0141 (-0.454)				
TECOSTATUS			-0.0057 (-0.214)			
INSTDIST				0.0166 (0.398)		
ECODIST					0,0000 (0.131)	
CULDIST						0,0000 (-0.033)
(Constant)	0.095* (1.79)	0.0939* (1.742)	0.1* (1.703)	0.076 (1.054)	0.0936* (1.696)	0.0205 (0.398)
INDUSTRY	0.0251 (0.87)	0.0285 (0.944)	0.0246 (0.838)	0.0244 (0.833)	0.0247 (0.837)	-0.0162 (-1.035)
OWNERSHIP	-0.0123 (-0.352)	-0.0137 (-0.385)	-0.0129 (-0.363)	-0.0108 (-0.302)	-0.0119 (-0.335)	0.0131 (0.814)
TSTATUS	-0.0357 (-1.043)	-0.0389 (-1.098)	-0.0361 (-1.035)	-0.0335 (-0.953)	-0.0359 (-1.031)	-0.0245 (-1.234)
CASHPMNT	0.0041 (0.125)	0.0053 (0.161)	0.0028 (0.083)	0.011 (0.296)	0.0047 (0.14)	-0.0194 (-1.084)
TGOVN	-0.0084 (-0.234)	-0.0048 (-0.129)	-0.0083 (-0.228)	-0.0004 (-0.011)	-0.0081 (-0.221)	-0.0036 (-0.154)
ACQAGE	-0.0104** (-2.231)	-0.0103** (-2.176)	-0.0105** (-2.203)	-0.01** (-2.074)	-0.0102** (-2.126)	0.0001 (0.038)
DEALSIZE	0.0008 (0.099)	-0.0002 (-0.02)	0.0008 (0.109)	0.001 (0.125)	0.0008 (0.108)	0.0029 (0.837)
NATRES	-0.0234 (-0.693)	-0.022 (-0.639)	-0.0228 (-0.662)	-0.0261 (-0.747)	-0.0245 (-0.693)	0.0071 (0.5)
R <sup>2</sup>	0.221	0.227	0.222	0.225	0.222	0.254
N	39	39	39	39	39	22

### Appendix H Results of cross-sectional regression, South Africa.

Cumulative abnormal return during 3 day event window, CAR(-1, +1), is the dependent variable in all models. Coefficients and t values are presented in the table, with t values given in parentheses. INDUSTRY: industry relatedness; OWNERSHIP: acquirer's level of ownership after acquisition; TSTATUS: target's private status; CASHPMNT: cash payment; AGOVN: acquirer's government ownership involvement; TGOVN: target's government ownership involvement; ACQAGE: acquirer age; DEALSIZE: natural logarithm of ratio of transaction value to acquirer's market capitalization; NATRES: natural resources related industry; TECOSTATUS: target country's economic status; INSTDIST: institutional distance; ECODIST: economic distance; CULDIST: cultural distance. TGOVN variable is zero in South Africa related sample. \* Regression coefficient is significant at the 0.10 level (2-tailed).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
AGOVN		-0.0111 (-0.177)				
TECOSTATUS			0.0074 (0.501)			
INSTDIST				0.0089 (0.607)		
ECODIST					0.0000 (0.131)	
CULDIST						-0.0005 (-0.85)
(Constant)	0.0275 (1.094)	0.0279 (1.099)	0.0217 (0.779)	0.021 (0.767)	0.0262 (0.957)	0.0445 (1.162)
INDUSTRY	0.0046 (0.375)	0.0048 (0.386)	0.0054 (0.436)	0.0046 (0.372)	0.0047 (0.385)	0.0063 (0.445)
OWNERSHIP	-0.0294* (-1.851)	-0.0293* (-1.834)	-0.0311* (-1.908)	-0.031* (-1.921)	-0.0298* (-1.834)	-0.0355* (-1.876)
TSTATUS	0.0105 (0.817)	0.0103 (0.787)	0.0104 (0.807)	0.0101 (0.779)	0.0108 (0.824)	0.0141 (0.897)
CASHPMNT	0.0009 (0.068)	0.0006 (0.046)	0.0024 (0.177)	0.0021 (0.157)	0.0013 (0.095)	0.003 (0.196)
TGOVN						
ACQAGE	0.0001 (0.566)	0.0001 (0.565)	0.0001 (0.589)	0.0001 (0.6)	0.0001 (0.557)	0.0001 (0.525)
DEALSIZE	0.0018 (0.513)	0.0018 (0.525)	0.0016 (0.464)	0.0016 (0.464)	0.0017 (0.485)	0.0008 (0.163)
NATRES	-0.0119 (-0.731)	-0.0121 (-0.735)	-0.0126 (-0.768)	-0.0128 (-0.778)	-0.0119 (-0.727)	-0.0195 (-1.017)
R <sup>2</sup>	0.051	0.051	0.053	0.054	0.051	0.068
N	105	105	105	105	105	89