The effect of acquisition announcements on Stock returns of acquiring firms for developed and emerging countries focusing on domestic and cross-border acquisitions

Abstract: By using a multi-country set of acquirers from 14 different markets, this work aims to develop a global understanding of the impact of acquisition announcements on developed- and emerging-market acquirers. This paper uses an empirical event-study approach to investigate the effect of acquisition announcements on the share price of bidding firms. The sample contains 624 acquisition announcements with target firms located throughout the world between 1997 and 2015. The results contradict the conventional wisdom that developed-market acquirers generally experience losses. Both emerging-market and developed-market bidders gain significantly in the short term. Moreover, for developed-market acquirers, the announcement of cross-border acquisitions (CBAs) yields higher abnormal returns than the announcement of domestic acquisitions. On the other hand, emerging-market bidders gain from announcing domestic acquisitions, and lose substantially when publishing news about CBAs. In addition, the level of institutional environment in the target country is found to have an impact on acquirer returns.

KEY WORDS: Acquisitions, Abnormal Returns, Cross-border Acquisitions, Institutional Environment

1. Introduction

Different kinds of mergers and acquisitions (M&As) are present in all industries and across all countries and continents. In fact, M&A activities have always been an integral part of the inorganic growth strategies of corporates throughout the world. A record year for the number of worldwide M&A transactions was marked in 2016, when more than 48,000 deals were announced, with a corresponding total deal value of above US$3.5 trillion.[1] Most of the deals are small and mid-size in value and only a fraction of the total deals are considered to be mega-deals, i.e. M&A transactions with a value higher than US$1billion.[2]

Not only has the number of M&A transactions increased in recent decades, but public and institutional interests, as well as numerous services supporting and consulting parties engaged in M&As, have become an integral part of this kind of deal-making. Moreover, the impacts of these events on numerous variables have been discussed in academic research, as well as in professional information technology circles all over the world. The focus of this research has been primarily on North American and European markets. Past studies have demonstrated that, in most cases, announcements of acquisitions tend to destroy value for shareholders of acquiring firms – in both short- and long-term perspectives.[3] While public deals of listed companies create a considerable amount of publicity and press coverage, acquirers are likely not to meet the public's high expectations and fall short in generating shareholder value or synergies.

This paper contributes to the existing literature and research by analysing the stock returns of acquiring firms at the time of acquisition announcements not only in developed markets, but also in emerging markets and a frontier market, as noted by the Morgan Stanley Capital International (MSCI) market classification.[4] The paper identifies the top acquisitions by value in 14 different markets, and compares the security performance of acquiring firms in the short term, i.e. around the announcement date. Acquisition announcements were selected from companies listed in the following countries: Argentina, Australia, Brazil, Canada, China, France, Germany, Hong Kong, India, Japan, Mexico, South Africa, South Korea, and the United States. The research focuses on the aggregate sample and on each individual

country, while also analysing the effect of domestic and cross-border acquisitions (CBAs), and the impact of the institutional environment in the target country on shareholder value creation.

The results indicate that both developed-market and emerging-market bidders benefit from announcing acquisitions in the short term. Moreover, when developed-market acquirers announce cross-border acquisitions, higher abnormal returns are reported than when announcing domestic acquisitions. For emerging-market bidders the effect is reversed. With regard to the impact of the institutional environment in the target country, this paper finds that when announcing CBAs with the target company incorporated in less developed countries, in terms of institutional environment, bidders benefit substantially.

The rest of this paper is organised as follows. Section 2 examines the relevant literature and its various findings on the topics being investigated. Thereafter, the method of data collection is explained and highlights relating to important data summary statistics are provided. Section 4 elaborates on the empirical methodology approach. In the following chapter, empirical results and comments on the contribution to existing literature are presented. Section 6 deals with possible limitations of the study. The paper concludes with a discussion of the implications of this study and possibilities for further research.

2. Literature Review and Developed Hypothesis

The effect of acquisition announcements on the stock prices of acquiring firms and target firms has already been investigated by several studies and research papers in a number of countries. This section first briefly describes the M&A environment, and goes on to summarise relevant findings from various countries and the focus topics being investigated. Hypotheses are then developed based on previous literature and findings.

The global M&A market is very active, with an average transaction value of more than US$1 trillion per annum over the past 20 years (Berk & DeMarzo, 2011). Considering this enormous transaction value and the publicity and press coverage being created, it is very probable that M&A announcements have an impact on stock returns. This impact has been extensively researched in several ways, especially in developed countries. However, these studies often arrive at different results and contradictory outcomes. Malatesta (1983) finds significant negative abnormal returns in the long term for acquiring firms, and significant negative abnormal returns as an immediate effect after M&A announcements. Agrawel, Jaffe and Mandelker (1992) support the findings by Malatesta, and conclude that stockholders of acquiring firms suffer a statistically significant wealth loss of approximately 10% over the first years following an M&A announcement. Betton, Eckbo, and Thorburn (2009), on the other hand, find that shareholders of acquiring companies realise a significant positive 0.73% gain on their stock prices shortly after an M&A announcement. Betton et al. (2009) argue for a small significant gain for acquirers, while Malatesta (1983) finds significant negative abnormal returns in the short term. On the basis of the findings mentioned above, it appears that various authors in developed countries arrive at contradictory results, at least in the short-term. Based on these contradictions and the twenty-year time span of this study, it is expected that positive and negative abnormal returns counter each other in the short and long term. The existence of this counter-effect means that there should be no significant abnormal returns for the data analysed in developed markets.

However, several studies found that in emerging markets, acquiring firms and their shareholders do experience significant positive abnormal returns in relation to corporate takeover actions. Simoes, Macedo-Soares, Klotzle and Pinto (2012) investigate the effect of acquisition announcements on the acquirer's stock prices in Latin America. They

find that in Argentina, statistically significant abnormal returns are experienced by acquirers when the event is announced and in the days subsequent to the acquisition – whereas this is not the case in Brazil. The authors identify a more efficient market in Brazil, in terms of the semi-strong efficient market hypothesis (Simoes et al., 2012). Moreover, Brito, Batistella and Fama (2005) conclude that in Brazil there are no significant abnormal returns for acquirers at the time of the announcement. Therefore, Simoes et al. (2012) and Brito et al. (2005) agree that in Brazil, markets seem to be efficient, with no significant abnormal returns for the acquirer when acquisitions are announced.

In addition to the research on M&A activities in South America, several studies have also researched the impact of M&A in Asia. Rani, Yadaf and Jain (2012) analyse share price performance after M&A announcements in India. Their results indicate that shareholders of acquiring firms generate a 1.6% statistically significant abnormal return during a five-day event window. In China, Chi, Sun and Young (2011) investigate a large sample of acquiring firms in the Chinese stock market. They identify significant positive abnormal returns six months before the announcement date and in the respective event windows of the acquisitions (Chi et al., 2011). They claim information leakage as a possible reason for the abnormal returns experienced before the official announcement date. Therefore, in addition to short-term abnormal returns in a South American country, significant evidence also exists for abnormal returns in India and China around the announcement date.

On the basis of the above discussion and the reviewed literature this paper develops the following three hypotheses:

H1: Using the aggregate sample of acquisition announcement events there are no significant abnormal returns for acquirers during the respective event windows.

H1a: An analysis of the MSCI[5] sample of announcements made by companies listed in developed countries leads to the hypothesis that there are no significant abnormal returns for acquirers during the respective event windows.

H1b: Isolating from the sample those announcements made by firms listed in emerging countries only, leads to the hypothesis that there are significant positive abnormal returns for acquirers in emerging countries.

Domestic and Cross-border acquisitions

Besides studies investigating the general impact of an acquisition announcement on acquirer returns in developed and emerging countries, there has also been considerable academic research into CBAs. Cross-border acquisitions have increased to the point where they constitute one third of the global number of deals, as discussed by Erel, Liao and Weisbach (2012). However, academic understanding of these deals – as against domestic M&As – is limited and often contradictory. In developed countries, research by experts on internationalisation predicts positive returns from cross-border acquisitions due to benefits through synergies and global expansion;[6] while other experts argue that CBAs result in wealth destruction, created by asymmetric information when evaluating foreign targets.[7] Similarly, with regard to emerging countries, Bhagat, Malhotra and Zhu (2011) discuss evidence of a significant positive market response to emerging-country acquirers in CBAs, while Aybar and Ficici (2009) identify that equity markets react negatively to emerging-market CBA announcements. Moreover, other important studies agree that CBAs create more value for acquiring shareholders than domestic acquisitions do. This finding holds good both for developed markets and for several emerging economies, as discussed by Moeller and Schlingemann (2005) and Feito-Ruiz and Menéndez-Requejo (2011). In order to extend the research on the impact of CBAs on acquirer returns, this work establishes the following hypotheses:

H2a: In developed countries, cross-border acquisitions generate higher abnormal returns for the acquirer than domestic acquisitions do.

H2b: In emerging countries, cross-border acquisitions generate higher abnormal returns for the acquirer than domestic acquisitions do.

Institutional Environment

Additionally, the level of institutional development in the country in which a target firm is incorporated was found to significantly influence returns for acquiring firms. On the one hand, a better developed institutional environment in the target country is a positive driver of cross-border acquisitions, according to Meyer, Estrin, Bhaumik and Peng (2009). On the other hand, Starks and Wei (2013) find that foreign acquiring firms incorporated in countries with a weaker institutional environment than the target-firm country, pay higher prices due to the fact that more risks are incurred with such targets, and that there are higher costs in complying with regulations. Although CBAs can be associated with higher risks and costs, this paper makes the following hypothesis:

H3: Cross-border acquisitions in which the target country is located in a better institutional environment than the acquirer country, generate higher abnormal returns than is usually the case with CBAs.

So far, this paper has discussed and reviewed several important findings on the impact of acquisition announcements in developed markets and in four emerging markets. The subsequent chapters continue with the analysis, and introduce the data collection and summary statistics, as well as the methodology approach.

3. Data Collection and Summary Statistics

The sample of acquisition announcements utilized in this study was obtained from Thomson Reuters Eikon, and specifically from the Mergers and Acquisitions database. It includes completed deals announced by companies from 14 countries between 1997 and 2015. The sample covers announcements of acquisition of assets for a 100% target stake acquisition, and announcements of acquisitions of majority assets. The paper therefore excludes announcements of partial and minority-stake acquisitions. The acquiring firms are publicly listed in the respective markets, and private firms are excluded from the sample. A total of 624 announcements satisfy the established criteria and are included in the sample.

Of the total number of events, 336 are from acquirers listed in countries classified as developed markets according to MSCI[8], while 255 events were announced by emerging-market incorporated companies. The remaining 33 announcements were made by companies listed in Argentina – a frontier market, according to MSCI. The sample includes 367 events for which the acquired stake is classified as 'Acquisition of Assets', implying the acquisition of a 100% stake in the target. A total of 257 events were classified as 'Acquisition of Majority Assets', where less than 100% was acquired. The mean deal value of all announcements was US$2.214 billion, while the median deal value amounted to US$1.0 billion. The spread is explained by the existence of some considerably large deals above US $20 billion, and many mid-size and small-value deals. A total of 313 events represent a deal value equal to or larger than US$1.0 billion, and were classified as mega-deals. There are 124 acquisition announcements that fell in a deal-value interval of between US$500 million and US$999 million, while 187 events represent a deal value of less than US$500 million. In the sample, 304 events are cross-border acquisitions, while 320 events are domestic acquisitions. For the 304 CBAs, 154 acquisitions targeted companies in countries with a lower quality of institutional environment, while 150

focused on targets incorporated in an institutional environment of a higher quality than in the acquiring country.[9] Appendix 1 summarises the described summary statistics.

Figure 1 illustrates the distribution of deal announcements over the sample period. It can be observed that both deal announcements and deal value declined drastically in 2002 following the global stock market downturn, and again after the global financial crisis in 2008. Since 2013, deal value per acquisition announcement has increased slightly, illustrating a trend towards higher-value acquisitions in the recent past. Furthermore, the graphical illustrations also represent two important merger waves – namely the fifth and sixth merger waves – as pointed out by Alexandridis, Mavrovitis and Travlos (2012).

For the analysis of stock price returns around announcement dates, daily closing prices of the respective acquirers and closing prices of implied market indices were downloaded from Bloomberg. As far back as the early 1980s, Morse (1984) justified the use of daily price data over monthly data on the basis of the increased statistical power achieved by reducing the sample interval to daily prices, applying more frequent sampling. In addition, Kothari and Warner (2009) support Morse's view by arguing that the use of daily returns allows for more informative studies of announcement effects due to improved statistic measurements. Non-trading days were excluded from the sample events, and prices from Bloomberg were additionally adjusted for capital changes, specifically for stock dividends, rights offerings/entitlements, stock splits/consolidations and spin-offs.

4. Methodology

Fama, Fisher, Jensen, and Roll (1969) essentially developed the event study model, which is widely used today. In general, only small modifications have been made to overcome certain limitations of the approach developed by Fama et al. (1969). The evidence suggests that event studies are a consistent and valid research tool, and are common in finance and accounting, as well as economic studies (Bodie, Kane & Marcus, 2011).

The seven-step approach for an event study developed by Campbell, Lo and MacKinlay (1997) was applied in structuring the event study for this paper. In the initial step, it is fundamental to identify the exact event being investigated, to ensure that all events can be compared with certainty. For this work, the event is defined as the acquisition announcement by firms acquiring either majority assets or full-ownership assets in other firms or other assets, e.g. drilling rights from governments.

Additionally, one should determine the period over which stock prices are examined. As the title of this paper suggests, the analysis focuses on a short-term event study. Short-term event studies are advantageous when investigating the immediate effect an announcement has on stock prices – therefore only a few days or weeks around the event date. For this type of study, one has to identify the event date, the event window, the estimation window and the post-event window. The event date, in this particular case, is the announcement date of the acquisition (Figure 2). In cases where the announcement date falls on a non-trading day, the event date is the first respective trading day after the announcement was made, as explained by Boehmer, Broussard and Kallunki (2002).

As far as the estimation, event and post-event windows are concerned, the challenge is to choose the optimal number of days to adequately capture the possible impact the announcement may have on the stock price. In fact, a trade off exists when choosing these optimal number of days for the respective windows (Boehmer et al., 2002). That is

to say, choosing a shorter event window may not include the full-time span within which investors learn about the event, while too large an event window, on the other hand, may also capture other information influencing the stock price (Boehmer et al., 2002). After researching the literature on the optimal window sizes for event studies, and analysing M&A announcements in research by Boehmer et al. (2002), Campbell et al. (1997), and on EventStudyMetrics[10], the conclusion was reached that the appropriate time periods to use were 180 days for the estimation window and 81 days for the main event window (40 days before and after the announcement date). Additionally, seven smaller event windows are considered in this paper for the short-term analysis of stock returns.

Following the determination of the selection criteria, a measure of the abnormal return of the stock is required for an assessment of the announcement's impact. The objective is to isolate the stock price change originated by the announcement of the acquisition. In order to achieve this objective, the abnormal return – which consists of the difference between the realised return of the considered share of the acquirer and the expected normal return predicted by a normal return model – needs to be estimated. For acquirer i and event announcement date τ, the abnormal return is given by:

$$AR_{i,\tau} = R_{i,\tau} - E[R_{i,\tau}|X_\tau] \qquad \text{[Eq. 4.1]}$$

where $AR_{i,\tau}$, $R_{i,\tau}$ and $E[R_{i,\tau}|X_\tau]$ represent the abnormal, actual, and normal returns for time period τ, respectively.

The market model has been chosen for this paper in order to obtain the expected returns. As a common statistical model, the market model bases the return of a security on the return of a matching market portfolio. It therefore assumes a steady linear relation between the return of the market portfolio and the security return. In terms of the market model, the expected return of a given security is given by:

$$R_{i,\tau} = \alpha_i + \beta_i R_{m,\tau} + \varepsilon_{i,\tau} \qquad \text{[Eq. 4.1.1]}$$

where
$$E[\varepsilon_{i,\tau}] = 0 \qquad \text{[Eq. 4.1.2]}$$

and
$$VAR[\varepsilon_{i,\tau}] = \sigma_{\varepsilon_i}^2 \qquad \text{[Eq. 4.1.3]}$$

$R_{i,t}$ and $R_{m,t}$ are the returns of security i and the market portfolio in time τ, respectively, and $\varepsilon_{i,t}$ is the zero-mean residual term. The model parameters α_i, β_i and $\sigma_{\varepsilon_i}^2$ are estimated by ordinary least squares regressions, based on a 180-day estimation window prior to the official announcement date. MacKinlay (1997) argues for the use of a broad-based and well-known stock index for the market portfolio. This paper adopts the most common stock indices in the fourteen respective countries to be used as the market portfolio. Hence, a multi-country version of the market model is applied in this work. A detailed overview of the stock indices used for the abnormal return calculations is set out in Appendix 2.

MacKinlay (1997) discusses the advantages of the market Model over other models, e.g. the constant mean return model. The variance of the abnormal returns is reduced, due to the fact that the fraction of returns associated with the variation in the market's return, namely $\varepsilon_{i,t}$, is removed. One can therefore achieve a higher probability of detecting

event effects. Boehmer et al. (2002) further justify the use of the market model, on the basis of the argument that it is probably the most commonly used and sophisticated model in event studies.

Blume (1975) notes that estimated beta coefficients in a sample – such as the one previously estimated above on the basis of ordinary least squares – display a tendency to regress towards the mean of all betas over time, namely 1. The author demonstrates that this regression tendency can be explained by nonstationarities in the betas of certain individual securities. Therefore, betas estimated on the basis of unadjusted historical betas are a poor indicator of the future. Betas used in the calculation of expected returns in this study are therefore adjusted according to Blume (1975):

$$\hat{\beta}_{i,Blume} = 0.33 + 0.67\hat{\beta}_i \qquad \text{[Eq. 4.1.4]}$$

This paper uses the cumulative abnormal return (CAR) method as a measure of aggregated abnormal returns.

Aggregated Cumulative Abnormal Returns

The first measure cumulates abnormal returns across time. The CAR measure is commonly used in short-term event studies, and it is utilised in this paper for that particular purpose. It is defined as:

$$CAR_{i(\tau_1,\tau_2)} = \sum_{t=\tau_1}^{\tau_2} AR_{i,\tau} \qquad \text{[Eq. 4.2.1]}$$

For testing CARs accordingly with a t-statistic, the cross average of the CARs is computed and is given by the cumulative average abnormal return (CAAR):

$$CAAR_{(\tau_1,\tau_2)} = \frac{1}{N}\sum_{i=1}^{N} CAR_{i(\tau_1,\tau_2)} \qquad \text{[Eq. 4.2.2]}$$

Significance Tests

For the purpose of investigating the CAARs for statistical significance, one particular test statistic is applied. This paper analyses the CAARs on the basis of a standard time-series t-test.

Under the null hypothesis, the CAARs are equal to zero. The t-statistic measures whether CAARs are significantly different from zero in statistical terms. It is assumed that the statistic follows the normal distribution asymptomatically. Equation 4.4.1 depicts the t-statistic computation for the time series of CAARs:

$$T_{\text{time}} = \frac{CAAR_t}{(\tau_2-\tau_1+1)^{\frac{1}{2}}\,\hat{\sigma}_{AAR_t}} \qquad \text{[Eq. 4.4.1]}$$

The variance estimator of the illustrated t-statistic is based on the time series of abnormal returns included in the estimation window of 180 days prior the announcement, and given by:

$$\hat{\sigma}^2_{AAR_t} = \frac{1}{M-d} \sum_{t=Est_{min}}^{Est_{max}} \left[AAR_t - \frac{1}{M} \sum_{Est_{min}}^{Est_{max}} (AAR_t) \right]^2 \qquad \text{[Eq. 4.4.2]}$$

where M represents the number of non-missing returns and d represents the degrees of freedom. In the market model, the degrees of freedom are equal to two. Additionally, to account for the circumstance that the event-window abnormal returns are out-of-sample predictions, the standard error is adjusted by the forecast error. For the applied market model, the adjustment is:

$$\sqrt{1 + \frac{1}{M} + \frac{(R_{m,\tau} - \bar{R}_{m,Est})^2}{\sum_{Est_{min}}^{Est_{max}} (R_{m,\tau} - \bar{R}_{m,Est})^2}} \qquad \text{[Eq. 4.4.3]}$$

The next section discusses the empirical results of the event studies conducted.

5. Empirical Results

The following chapters discuss the results of the various event studies. For each research topic being investigated, a short-term CAR event study is conducted. In addition to tables with output statistics, this paper also plots average abnormal returns (AARs) and CAARs for the short-term event studies.

Empirical Results of the Aggregate Sample

For the first research topic, this work aggregates all data from the sample, and conducts event studies on all 624 observations from 14 countries. It therefore aims to investigate a globalised set of acquisition announcements, and to obtain significant results across regions and over time. Appendix 3 provides descriptive statistics for the CARs obtained in the short-term event study conducted on the aggregate sample.

The results in Table 1 provide strong evidence against hypothesis H1. Specifically, four short-term event windows show significant positive CAARs. This suggests that, on average, shareholders of acquirers contained in this sample experience value creation in the short term, and that the market reacts positively to acquisition announcements. This finding contradicts, in part, the conventional wisdom that acquirers tend to destroy shareholder value when announcing an acquisition – at least this seems not to be the case at the time of the announcement date in this study. Over an event window of three days, acquirers in this study gain, on average, 0.9%. This finding is similar to empirical results identified by Betton et al. (2009), whose study focused on a sample of US acquirers. The authors discuss comparable results in their event study, with bidder gains of 0.73% over the same event window. They explain this on the basis of the positive returns of many acquirers with low and mid-size market capitalisations. Market sizes of acquirers in this work are lower than in a sample of purely US acquirers, as this works also aggregates acquirer returns from companies incorporated in emerging markets and smaller developed markets. Those acquirers with smaller market sizes might also explain the significant positive CAAR of 0.9%. In fact, acquirers from emerging markets experience higher abnormal returns, on average, than developed-market acquirers, as pointed out in chapter 5.2.

Moreover, the data illustrate that the positive market reaction tends to revert to its pre-announcement level within 20 days after the announcement, as Figure 3 depicts. Interestingly, over an 81-day event window, shareholders of acquiring companies lose almost 0.9%, which is due primarily to negative AARs, commencing 20 trading days after the announcement. However, at a 10% significance level, this wealth loss is not statistically significant.

Empirical Results of Individual Countries

The next chapter elaborates on the results obtained for event studies implemented separately for two groups of developed-market acquirers and emerging-market acquirers, as well as separately for the fourteen countries dealt with in this paper. The presentation follows alphabetical order, and statistical outputs are grouped by events from developed markets and emerging markets.

Table 3 illustrates the results obtained for the individual country short-term event study. For the two subsamples of grouped acquirers from developed markets and emerging markets, this paper finds proof of significant positive CAARs over a five-day event window and the announcement date itself. Both developed-market and emerging-market acquirers experience a significant positive 1% CAAR over a five-day event window. On the announcement day itself, emerging-market acquirers display a 0.4% higher CAAR than developed-market acquirers, despite the fact that both display significant CAARs in the short term.

The previously established hypothesis of no significant abnormal returns for developed-market acquirers in the short term at the time of an announcement is therefore rejected. Moreover, this paper finds evidence for the previously established hypothesis relating to acquirer returns from emerging markets. In particular, significant CAARs are identified for Argentina and India in respect of both event windows, and for Brazil and China in respect of one of the two windows. In Argentina, the significant positive CAARs realised by acquirers can most likely be explained on the basis of lower regulation and a less efficient security market, as noted by Simoes et al. (2012). In India it is common practice to retain the acquired entity as a separate subsidiary. Rani et al. (2013) note that these types of acquisitions result in significant positive abnormal returns for acquirers, and could therefore also explain the significant positive CAAR on the announcement date in this study. Furthermore, two factors might explain why Chinese market acquirers realise a 1.3% gain on the announcement date itself. First, the Chinese market is not as mature as other developed security markets, such as the US, and seems to be characterised by irrational trading behavior, as discussed by Chi et al. (2011). In addition, M&As in China only became frequent in the late 1990s. Therefore, many events in the sample occurred during the M&A development stage in China.

This chapter has presented the empirical results obtained for developed-market and emerging-market acquirers in respect of the short-term event study conducted. This paper rejects the hypothesis that developed-market bidders lose value at the time of the announcement; and it therefore finds significant evidence that contradicts the conventional wisdom relating to wealth loss. Furthermore, this study proves that, on average, emerging-country acquirers experience gains at the time of the announcement of an acquisition.

Domestic and Cross-border Acquisitions Results

In this chapter, the sample of acquisition announcements as a whole is divided into four subsamples. The event study in this part of the paper therefore forms two portfolios – domestic acquisitions and cross-border acquisitions – out of all the acquisitions made by companies listed in developed markets. The same procedure is applied to acquisitions made by emerging-market firms. As in the previous chapters, a short-term event study is conducted to investigate the

four subsamples. A total of 142 domestic acquisitions and 194 cross-border acquisitions are announced by developed-market acquirers, whereas emerging-market acquirers announced 178 domestic acquisitions and 110 CBAs.

Tables 3 and 4 illustrate the results for developed-market acquirers and their domestic and cross-border acquisitions. The established hypothesis H2b is confirmed for the short-term event study. Cross-border acquisitions generate slightly higher abnormal returns for developed-market acquirers than domestic acquisitions do.

During a post-announcement window of 10 days, developed-market bidders gain a significant 2.1%. For the subsample of bidding firms from these markets, it can be argued that investors value CBAs more highly than domestic acquisitions. This substantial gain can most likely be explained on the basis of positive effects from international expansion, as well as beliefs in value-adding synergies. Outlined by Baldwin and Caves (1992) and Morck and Yeung (2003), the internationalisation theory explains positive acquirer valuations in CBAs on the basis of gains from geographical diversification, motivated by the search for synergies in intangible assets, e.g. patents and trade secrets. For this reason, CBAs by developed-market acquirers are more positive than domestic acquisitions themselves.

While this paper supports established findings for developed-market bidders, emerging-market acquirers experience losses when announcing cross-border acquisitions., as illustrated in Table 6. Over post- announcement windows of 10 and 20 days, in particular, bidding firms lose more than 1% on average, which is statistically significant at a 10% significance level. This trend can clearly be well-observed in Figure 9, and is even more severe over the main event window of 81 days, where bidding firms display a substantial negative CAAR of almost 4%. The negative CAARs suggest that the hypothesized gains from cross-border growth are offset by costs related to the acquisition of foreign targets. In this sample, investors do not consider CBAs by emerging-market bidders as a value-creating strategy. This supports the findings of Aybar and Ficici (2009), and is also consistent with the value-decreasing diversification effect for US acquirers identified by Denis et al. (2002), whose explanations are presumably also applicable to the results obtained in this paper. Denis et al. (2002) argue for challenges in the process of evaluating foreign targets explained by the presence of asymmetric information. Identified by the authors as relevant for US acquirers, asymmetric information in valuation is potentially even more of a challenge for emerging-market acquirers, who are conceivably less experienced in valuations themselves. Moreover, Aybar and Ficici (2009) associate the value destruction experienced by emerging-market bidders with the acquisition of targets operating in the same or related industries. This reasoning also holds true for this study, as illustrated in Appendix 4. Results from this supportive-event study imply that emerging-market bidders experience losses, especially when acquiring targets are located across borders and operate in the same industry.

Impact of Institutional Environment Results

As discussed in chapter 2.3, many studies find that the development stage of the institutional environment of a country in which the target is incorporated influences return for acquirers. The effect is only applicable in cross-border acquisitions, and this work therefore splits the sample of CBAs into two groups. The first group consists of CBAs where the target firm is located in a lower-ranked country in terms of institutional environment, according to the Global Competitiveness Rankings of the World Economic Forum.[11] This applies to 154 events out of a total of 304 cross-border acquisitions. The second group consists of CBAs where the target companies' headquarters are located in a higher institutional environment than the acquirer. The resulting 150 events fulfil these criteria.

Table 7 illustrates the output of the short-term event study. Substantial gains are experienced by acquirers conducting cross-border acquisitions in countries with a less developed institutional environment. Specifically, in short-term post-event windows of 10 and 20 days, bidders increase shareholder wealth by 3.4% and 2.1%, respectively. Moreover, statistically significant CAARs are obtained at around the time of the announcement itself, with the highest CAAR illustrated over a five-day event window. It can therefore be argued that investors substantially value CBAs for which the target firm is incorporated in a less developed institutional environment, especially over a two-week post-event window. Rossi and Volpin (2004) provide explanations for this wealth gain. They argue that targets gain from the lower cost of capital associated with a better institutional environment of the acquirer. Acquirers therefore do not pay higher takeover premiums, and share the surplus created by exposing the target firm to a better institutional environment and implementing the institutional standards of the home country in the target firm. The gain for target shareholders is thereby also reflected as a gain for bidder shareholders, due to the fact that lower premiums are paid.

Surprisingly, for the second group – cross-border acquisitions with the target in a country with a higher-ranked institutional environment – CAARs for bidders are negative, as outlined in Table 8. Over the main event window of 81 days, shareholders of bidding firms lose 2.5%, which is statistically significant at 5%. This wealth loss occurs almost exclusively over the post-event window of 20 days. It implies that investors do not perceive these types of acquisitions as value-adding strategies shortly after the announcement. Furthermore, Starks and Wei (2013) argue that acquirers pay considerably high premiums in these types of acquisitions, because bidding firms need to compensate target-firm shareholders for the increased risk implied by exposing them to less developed institutional environments. In addition to these premiums, investors could negatively value the ongoing costs of complying with the higher institutional environment after the acquisition. The established hypothesis H3 is thereby rejected. This study finds higher abnormal returns for CBAs in which the target firm is located in a country that has a lower institutional development ranking.

6. Conclusion

This paper has analyzed acquirer returns in developed and emerging markets, and focused on the impact of domestic and cross border acquisitions, as well as the impact of the institutional environment in the target country on bidder returns.

Interestingly, the findings of this research reject the conventional wisdom that developed-market acquirers always lose shareholder wealth when announcing acquisitions. In this work, developed-market acquirers display positive abnormal returns in the short term around the announcement date. Emerging-market acquirers also display positive gains after announcing acquisitions in the short term. The study also investigated the impact of domestic acquisitions and cross-border acquisitions on bidder returns. For developed-market bidders, announcing cross-border acquisitions leads to higher abnormal returns than announcing domestic acquisitions. This is probably the result of investors' being positively disposed towards the geographical expansion strategy of the acquirer, motivated by the search for synergies abroad. On the other hand, emerging-market acquirers lose when announcing cross-border acquisitions, but gain when publishing news relating to domestic acquisitions. This finding contradicts the previously established hypothesis, and can probably be explained by challenges in estimating the value of foreign targets, thereby increasing the likelihood of false premiums. Moreover, a supportive event study yields the insight that wealth loss can be entirely accounted for by emerging-market bidders conducting cross-border acquisitions relating to a target firm operating in the same industry. As far as the impact of the institutional environment in the target country is concerned, this study demonstrates that bidders gain substantially when CBAs are announced in countries with a less developed institutional environment. Acquirers pay lower premiums, thereby sharing the gain of target shareholders by exposing them to a better institutional environment. Cross-border acquisitions announced in countries with a more highly developed institutional environment display negative abnormal returns for bidders. In acquisitions of this nature, acquirers pay considerably high premiums in order to compensate target firm shareholders for the increased risk of being exposed to a less developed institutional environment.

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Appendix 1

Tables:

Table 1: CAAR output – short-term event study on aggregate sample

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	-0.009	0.170	*[-1...1]*	*0.009*	*0.000***
[-20...20]	-0.001	0.783	*[0...0]*	*0.005*	*0.000***
[-10...10]	0.004	0.208	*[0...10]*	*0.006*	*0.008***
[-2...2]	*0.010*	*0.000***	[0...20]	0.001	0.751

represents significance at ***1%; **5%; *10%

Table 2: CAAR output short-term event study for individual countries with event windows of five days and the announcement day itself.

Acquirers from	Event Window [-2…2]		Event Window [0…0]	
	CAAR	P-Value	CAAR	P-Value
Developed Markets	*0.010*	*0.000***	*0.003*	*0.001***
Australia	*0.015*	*0.000***	0.002	0.350
Canada	**0.009**	**0.051***	*0.005*	*0.012***
France	**0.015**	**0.001***	0.000	0.910
Germany	**0.016**	**0.001***	*-0.006*	*0.003***
Hong Kong	**0.026**	**0.039***	0.003	0.542
Japan	-0.006	0.339	*0.011*	*0.000***
United States	0.001	0.842	0.001	0.685
Emerging Markets	*0.011*	*0.000***	*0.007*	*0.000***
Argentina	*0.040*	*0.000***	*0.022*	*0.000***
Brazil	*0.011*	*0.029***	0.002	0.488
China	0.008	0.351	*0.013*	*0.001***
India	*0.013*	*0.097***	*0.019*	*0.000***
Mexico	-0.007	0.251	0.001	0.651
South Africa	0.009	0.191	-0.003	0.300
South Korea	0.007	0.299	0.002	0.485

significance at ***1%; **5%; *10%

Tables 3 & 4: CAAR-output short-term event study for domestic and cross-border acquisitions announced by developed-market acquirers with significant CAARs at the time of the announcement in both subsamples.

Developed-market acquirers: Domestic Acquisitions

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	0.003	0.810	*[-1...1]*	*0.006*	*0.010***
[-20...20]	0.004	0.648	[0...0]	0.001	0.637
[-10...10]	*0.017*	*0.005****	[0...10]	0.002	0.702
[-2...2]	*0.009*	*0.002****	[0...20]	-0.002	0.706

Developed-market acquirers: Cross-border Acquisitions

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	0.001	0.911	*[-1...1]*	*0.007*	*0.001****
[-20...20]	0.012	0.111	*[0...0]*	*0.005*	*0.000****
[-10...10]	*0.015*	*0.006****	*[0...10]*	*0.021*	*0.000****
[-2...2]	*0.010*	*0.000****	[0...20]	0.006	0.247

represents significance at ***1%; **5%; *10%

Tables 5 & 6: CAAR output short-term event study for domestic and cross-border acquisitions announced by emerging-market acquirers with significant CAARs around the announcement date for both subsamples, and significant CAARs for the main estimation window for the CBA subsample

Emerging-Market Acquirers: Domestic Acquisitions

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	-0.021	0.154	*[-1...1]*	*0.012*	*0.000****
[-20...20]	-0.013	0.212	*[0...0]*	*0.009*	*0.000****
[-10...10]	-0.005	0.535	[0...10]	0.003	0.527
[-2...2]	*0.016*	*0.000****	[0...20]	0.004	0.637

Emerging-Market Acquirers: Cross-border Acquisitions

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	*-0.038*	*0.011***	*[-1...1]*	*0.008*	*0.005****
[-20...20]	*-0.029*	*0.005****	*[0...0]*	*0.004*	*0.033***
[-10...10]	*-0.024*	*0.001****	*[0...10]*	*-0.010*	*0.069**
[-2...2]	0.000	0.984	*[0...20]*	*-0.013*	*0.081**

represents significance at ***1%; **5%; *10%

Table 7: CAAR output short-term event study for CBAs with target firm in a lower institutional environment. Significant positive CAARs are obtained, especially over the post-announcement windows.

CBAs: Target in Lower Institutional Environment

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	0.007	0.570	*[-1...1]*	*0.013*	*0.000***
[-20...20]	0.001	0.676	*[0...0]*	*0.008*	*0.000***
[-10...10]	*0.022*	*0.001****	[0...10]	0.034	0.000***
[-2...2]	*0.012*	*0.000****	[0...20]	0.021	0.001***

represents significance at ***1%; **5%; *10%

Table 8: CAAR output short-term event study for CBAs with target firm in a higher institutional environment. Significant negative CAARs are obtained over the main event window of 81 days and especially over the post-announcement windows.

CBAs: Target in Higher Institutional Environment

Event Window	CAAR	P-Value	Event Window	CAAR	P-Value
[-40...40]	*-0.025*	*0.034***	[-1...1]	0.002	0.318
[-20...20]	0.001	0.556	[0...0]	0.000	0.764
[-10...10]	*-0.015*	*0.011***	*[0...10]*	*-0.012*	*0.008***
[-2...2]	0.002	0.450	*[0...20]*	*-0.020*	*0.001***

represents significance at ***1%; **5%; *10%

Figures

Figure 1: Distribution of announcements and deal value over the sample period. The figure illustrates the number of acquisition announcements per year and the corresponding total deal value per year for the sample presented in the Separate Appendix: Complete List of Acquisition Announcements.
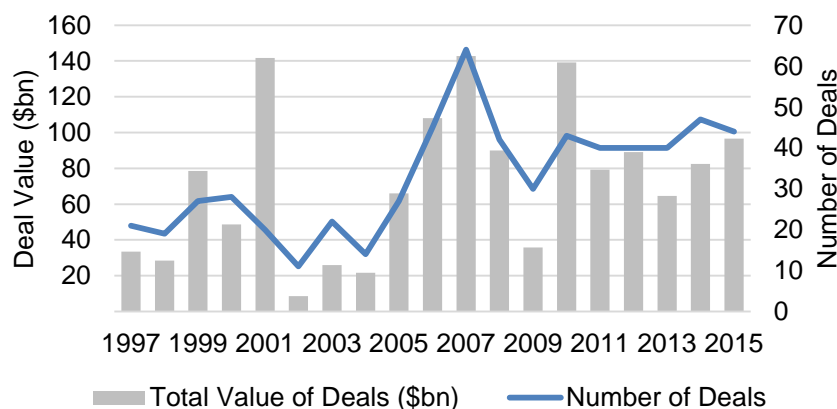

Figure 2: Estimation and event windows for event studies with clear separation between pre- and post-event periods.
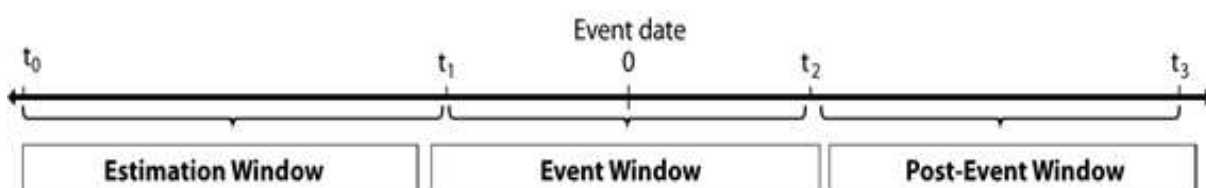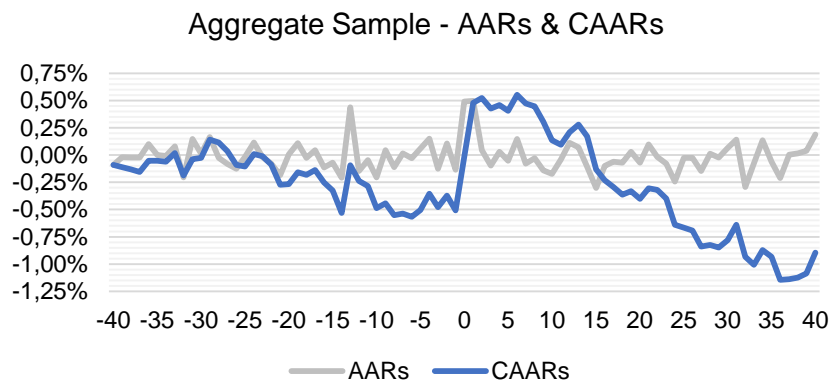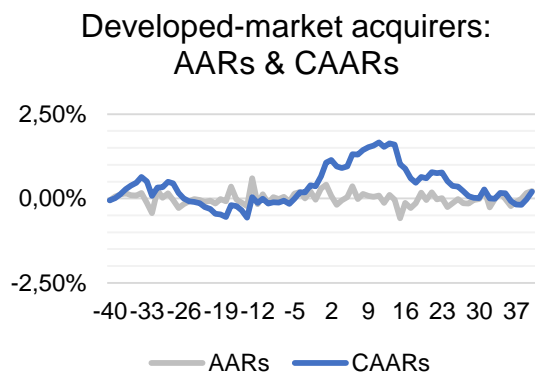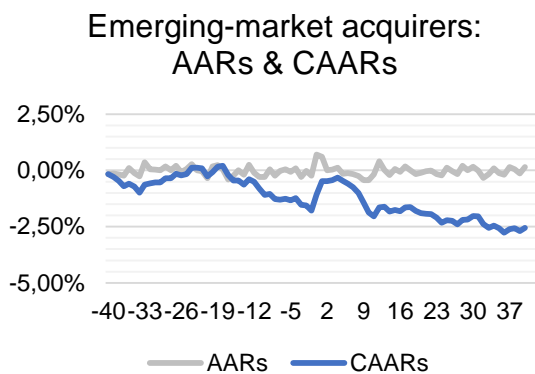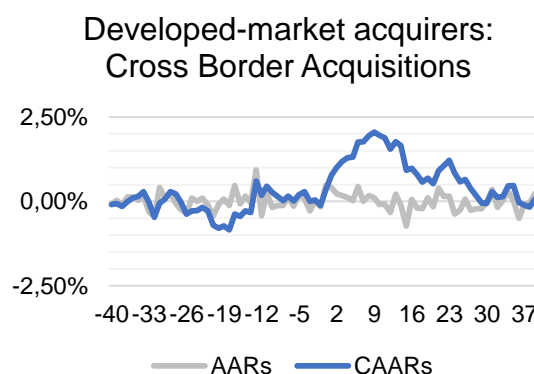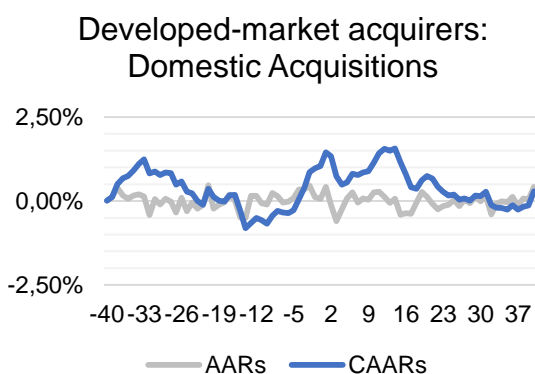
Figure 3: Plotted AARs and CAARs for the aggregate sample over the main event window of [40…40] with statistically significant CAARs around the event date.


Figures 4&5: Plotted AARs and CAARs for developed-market acquirers and emerging-market acquirers over the main event window of [40…40] with statistically significant CAARs around the event date for both subsamples.


Figures 6 & 7: Plotted AARs and CAARs for developed-market acquirers and their domestic and cross-border acquisitions over the main event window of [40…40], with statistically significant CAARs around the event date for both subsamples.

Figures 8 & 9: Plotted AARs and CAARs for emerging-market acquirers and their domestic and cross-border acquisitions over the main event window of [40…40] with statistically significant CAARs around the event date for domestic acquisitions and significant negative CAARs for cross-border acquisitions over the main event window.
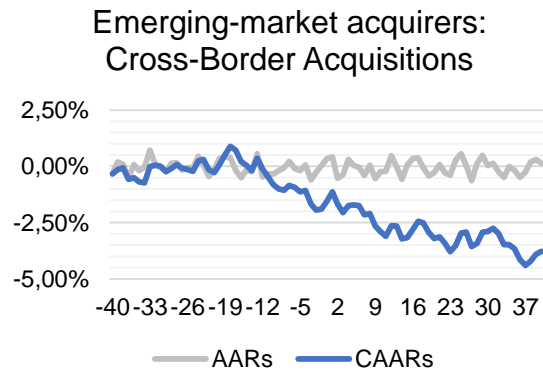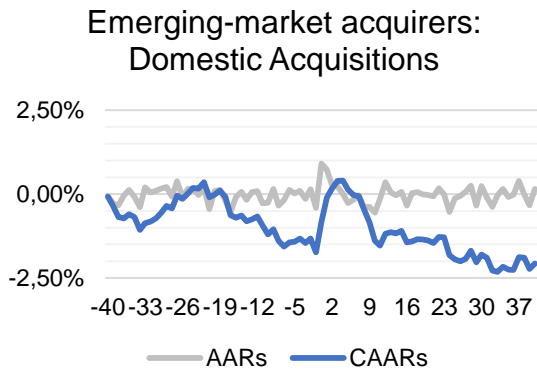
Figures 10 & 11: Plotted AARs and CAARs acquirers and cross-border acquisitions with the target firm located in lower and higher intuitional environments, respectively.
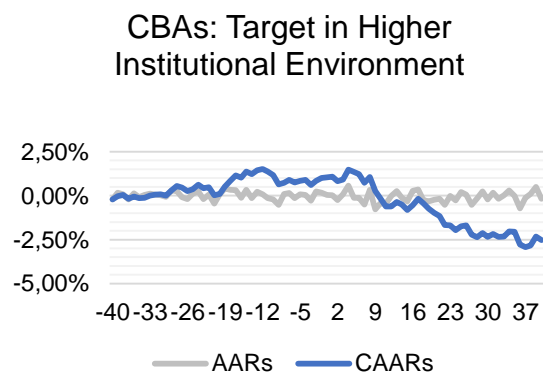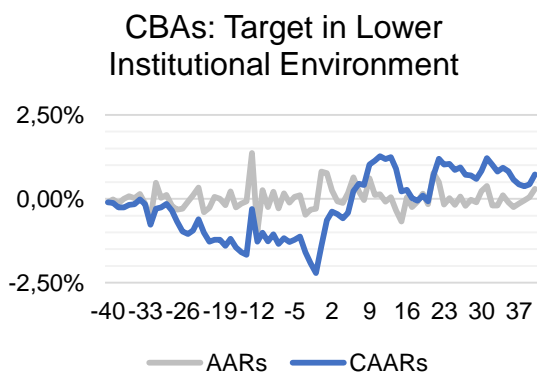
Appendix 2

Summary Statistics of Sample

	AR	AT	BS	CT	CH	HK	FP
	Argentina	Australia	Brazil	Canada	China	Hong Kong	France
No. observations	33	58	45	57	25	24	53
Deal Value							
Mean Deal Value (US $m)	73	1255	2298	2008	1881	1417	3136
Developed / Emerging Market[1]	3	1	2	1	2	1	1

[1]according to MSCI classification, where 1=Developed Market, 2=Emerging Market, 3=Frontier Market

No. Domestic Acquisitions	28	25	33	21	20	1	17
No. Cross-border Acquisitions	5	33	12	36	5	23	36
Inst. Environment Ranking[2]	135	19	94	14	47	8	32

[2]according to World Economic Forum

CBAs in							
Lower Inst. Environment	0	16	6	33	2	23	14
Higher Inst. Environment	5	17	6	3	3	0	22

	GY	IN	JT	MM	SJ	KS	US
	Germany	India	Japan	Mexico	South Africa	South Korea	United States
No. observations	44	45	50	39	53	48	50
Deal Value							
Mean Deal Value (US $m)	3135	662	2267	617	481	1183	8681
Developed / Emerging Market[1]	1	2	1	2	2	2	1

[1]according to MSCI classification, where 1=Developed Market, 2=Emerging Market

	GY	IN	JT	MM	SJ	KS	US
No. Domestic Acquisitions	15	12	30	19	26	40	33
No. Cross-border Acquisitions	29	33	20	20	27	8	17
Inst. Environment Ranking[2]	17	70	11	102	36	82	30

[2]according to World Economic Forum

CBAs in

	GY	IN	JT	MM	SJ	KS	US
Lower Inst. Environment	22	6	16	4	9	1	2
Higher Inst. Environment	7	27	4	16	18	7	15

Appendix 3

List of Indices as a benchmark for the abnormal return calculation for every country contained in this study.

Country	Bloomberg	Index Name	Exchange
Argentina	Merval Index	Argentina Merval Index	Bolsa Comercio Buenos Aires
Australia	AS30 Index	Australian All Ordinaries Index	Australian Stock Exchange
Brazil	IBOV Index	Ibovespa	Sao Paulo Stock Exchange
Canada	SPTSX Index	S&P/Toronto Stock Exchange Composite Index	Toronto Stock Exchange
China	SHCOMP Index	Shanghai Stock Exchange Composite Index	Shanghai Stock Exchange
Hong Kong	HSCEI Index	Hang Seng China Enterprises Index	Hong Kong Stock Exchange
France	CAC Index	CAC 40 Index	Euronext Paris
Germany	DAX Index	Deutsche Boerse AG German Stock Index	Frankfurt Stock Exchange
India	SENSEX Index	S&P BSE Sensex Index	Bombay Stock Exchange
Japan	NKY Index	Nikkei 225	Tokyo Stock Exchange
Mexico	MEXBOL Index	S&P/BMV IPC	Bolsa Mexicana de Valores
South Africa	JALSH Index	FTSE/JSE All-Share Index	Johannesburg Stock Exchange
South Korea	KOSPI Index	Korea Stock Exchange KOSPI Index	Korea Stock Exchange
United States	INDU Index	Dow Jones Industrial Average	New York Stock Exchange

Appendix 4

Descriptive Statistics for the results obtained in event studies on the aggregate sample.

Descriptive Statistics	Mean	Std.	Skew.	Kurt.	Min.	Max.
CAR [-40,+40]	-0.01	0.12	-0.56	10.63	-0.98	0.81
CAR [-2,+2]	0.01	0.04	0.55	5.02	-0.18	0.24
CAR [0,0]	0.00	0.02	2.15	24.76	-0.15	0.25
BHAR [0,360]	0.02	0.25	2.66	27.33	-1.25	2.68
BHAR [0,240]	0.04	0.20	2.17	19.35	-0.79	1.90
BHAR [0,120]	0.01	0.15	3.14	22.87	-0.57	1.28