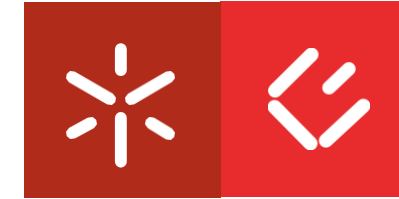




Shareholders' Wealth Effects of Cross-border Mergers  
and Acquisitions in Developed Countries

José Carlos Barbosa Pimentel

UMinho | 2021



**University of Minho**

School of Economics and Management

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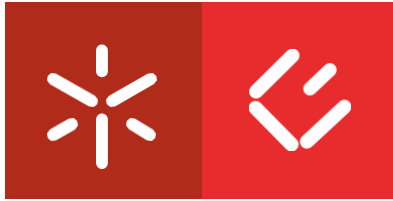
Dissertation

Master in Finance

Supervised by

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## **Biographical Note**

José Carlos Barbosa Pimentel was born in 1997 in Alijó. He holds a bachelor's degree in Business Management from the University of Évora. He also attended the University of Economics in Bratislava and the University of Zurich (EZH) in Switzerland.

He is currently finishing a Masters's in Finance at the University of Minho and starting his career in Poland in the Trading & Capital Markets department of NatWest Group Bank.

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## **Statement of integrity**

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration.

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# Shareholders' Wealth Effects of Cross-border Mergers and Acquisitions in Developed Countries

## **ABSTRACT**

This dissertation aims to analyze the impact of cross-border mergers and acquisitions on the wealth created for shareholders in developed countries. Cross-border mergers and acquisitions impact not only shareholder wealth but also culture, access to new markets, cost savings, and company value.

The sample includes 942 cross-border mergers and acquisitions from 23 developed countries from 2005 to 2019. The impact of cultural distance, geographic distance, and language on cumulative abnormal returns (CAR) is investigated.

The results show that shareholders of the acquirer companies do not react to the announcement of cross-border mergers and acquisitions, obtaining cumulative abnormal returns close to zero. Furthermore, target shareholders experience significant positive returns (29.8%). These results are mainly in line with the empirical results.

In addition, we find that cultural and geographical distance have no impact on the cumulative abnormal returns (CAR) for all shareholders. Lastly, the common language between the bidders and the target companies is also shown not to impact the wealth created for the shareholders.

**Keywords:** Cross-Border M&A, Developed Countries, Shareholders' Wealth, Cumulative Abnormal Returns, Event Study

**JEL-Codes:** G15, G1

Os efeitos sobre a riqueza dos acionistas das fusões e aquisições transfronteiriças em países desenvolvidos

## RESUMO

Esta dissertação tem por objectivo analisar o impacto das fusões e aquisições transfronteiriças sobre a riqueza criada para os acionistas nos países desenvolvidos. As fusões e aquisições transfronteiriças não só afectam a riqueza dos accionistas, mas também a cultura, o acesso a novos mercados, a redução de custos e o valor das empresas.

A amostra inclui 942 fusões e aquisições transfronteiriças de 23 países desenvolvidos de 2005 a 2019. É analisado o impacto da distância cultural, distância geográfica e a língua nos retornos anormais acumulados.

Os resultados mostram que os accionistas das empresas adquirentes não reagem ao anúncio de fusões e aquisições transfronteiriças, obtendo retornos anormais acumulados próximos de zero. Os accionistas das empresas alvo evidenciam retornos positivos significativos (29.8%). Estes resultados estão de acordo com os resultados empíricos.

Além disso, a distância cultural e geográfica não têm impacto nos retornos anormais acumulados para os shareholders. Por último, a língua em comum entre as empresas licitantes e os alvos mostram não ter impacto na riqueza criada para os shareholders.

**Palavras-chave:** Fusões e Aquisições Transfronteiriças, Países Desenvolvidos, Riqueza dos Accionistas, Retornos Anormais Cumulativos, Estudo de Eventos

**JEL-Classificação:**G15, G1



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## 1.Introduction

There has been a considerable number of cross-border M&A transactions every year between companies from developed and emerging countries due to globalization, the cultural transformation of companies, opportunities for economies of scale, and access to modern technologies to be more competitive in the market. M&A transactions have been very volatile, even though cross-border M&A have remained very robust, representing 30% of the total M&A market in 2018 (UNCTAD, 2018). There has recently been a decrease in cross-border M&A activity due to macroeconomic factors such as the 2008 financial crisis, although there has been a slight increase since 2014 (Cretin, Dieudonné, & F.Bouacha, 2015), (UNCTAD, 2018). The main reason companies seek to complete M&A transactions is undoubtedly to increase their value (Erel, Liao, & Michael S., 2012). These deals somehow impact the wealth of the shareholders involved.

In this context, are there negative returns from cross-border M&A announcements for the bidder's and positive for target's shareholders? Are returns on cross-border M&A announcements higher for companies with smaller corporate cultural distances? Do companies with a higher geographic distance lead to smaller returns on cross-border M&A announcements? Do companies that speak the same language positively affect returns to shareholders? 942 cross-border mergers and acquisitions in developed countries between 2005 and 2019 are analyzed to explain this. The companies in the sample are public companies that hold less than 50% of the shares involved in cross-border M&A transactions in selected developed countries.

The recent literature on the impact of cross-border mergers and acquisitions on shareholder wealth shows that there are different findings with respect to returns for bidder's and target's shareholders at the time of announcement. In the literature, there is evidence that there are positive returns for the bidder's shareholders (Doukas J. , 1995), (Wong, 2009), (Francis, Hasan, & Sun, 2008). Other authors have identified negative returns for bidders (Goddard, 2012), (Moeller & P.Schlingemann, 2005), (Jensen & Ruback, 1983). There are more conclusive studies concerning target's shareholders, and these mostly presents that there is a positive impact on returns (Martynova & Renneboog, 2011), (Goergen & Renneboog, 2004). Furthermore, cultural distance and geographical distance negatively influence the wealth created for shareholders (Boateng, 2019), (Ragozzino, 2009).

Based on the literature review and available data, this study focuses on shareholder wealth created by cross-border mergers and acquisitions, considering several determinants of mergers

and acquisitions such as cultural distance, geographic distance, and language. I analyze mergers and acquisitions deals involving targets from 23 developed countries selected from geographic, political and economic characteristics according to the MSCI Developed Markets Indexes. In the case of bidders countries, the data was obtained globally. Developed countries have more advanced economies, having specific characteristics such as access to the latest technology, political stability, and economic measures. In terms of their relationship with cross-border M&As, companies from developing countries tend to be acquired by developed countries to access the best technology and improve efficiency (Dong, 2020).

The Event Studies methodology is used to analyze the shareholders' returns, allowing to capture the abnormal returns to shareholders around the announcement of the M&A transactions, where the market reaction will be noted and reflected in the stock price (MacKinlay, 1997). In order to measure the impact on shareholder wealth, this methodology is very relevant by calculating the average abnormal returns (AAR) and the cumulative abnormal returns (CAR) to shareholders. The event window used to capture the abnormal returns of acquirer and target companies is five days before and after the announcement. The event windows (-1, +1) and (-2, +2) are also used for statistical comparisons (K.Oler, S.Harrison, & R.Allen, 2008). To understand the effect of cross-border mergers and acquisitions on shareholder wealth and test the study's hypotheses, it is necessary to estimate multiple linear regression models.

In the results presented, the cumulative abnormal returns for bidder's and target's shareholders suggest that target's shareholders have significant positive returns (29.8%). In comparison, the bidder's report returns to near zero, for the event window five days before and after the announcement. Furthermore, the hypotheses related to cultural and geographical distance do not affect the cumulative abnormal returns for shareholders, as the returns are statistically insignificant. Finally, the common language among companies is shown to have no impact on the returns of bidders and target shareholders.

This dissertation is organized as follows: Section 2, Literature Review, describes and identifies all sources that support the dissertation. In sections 3 and 4, Research Hypotheses, Methodology, and Data respectively, the hypotheses are discussed, describing the methodology used and the descriptive statistics of the data. In Section 5, Results and Discussion, the results obtained are interpreted and related to the literature review. Finally, in the Conclusion and Limitations, the results and their contribution to cross-border mergers and acquisitions are summarized, and limitations.

## **2. Literature Review**

### **2.1. Cross-Border Mergers and Acquisitions**

Mergers and acquisitions are an important and complex topic in corporate finance. The fact that it is easy to negotiate cross-listed shares in the market is one reason for this, although there are divergences between countries in the way these deals are done (Whitaker, 2016). Developed countries and cross-border M&A play an essential role as processes become complex to analyze and wealth is created for shareholders. Cross-border mergers and acquisitions occur when there is a “full or partial acquisition or merger between companies in different countries” (Zhang, X. & Wang, 2004). The number of cross-border M&As between 1998 and 2007 increased by 22% in total volume (Erel, Liao, & Michael S., 2012). Several authors identify the reasons that lead to cross-border M&A deals. These reasons may be related to economies of scale, allowing companies to reduce costs, market position, and diversification opportunities (Andrade, Mitchell, & Stafford, 2001).

### **2.2. Cross-Border M&A and Shareholders Wealth**

There are different findings related to abnormal returns on bidders and target shareholders in cross-border mergers and acquisitions. Starting with studies with positive effects on bidder's shareholders, in a study on cross-border acquisitions by US companies between 1975 and 1989, there is evidence of small positive abnormal returns for bidder's shareholders. (Doukas J. , 1995). In another study of mergers and acquisitions in the United Kingdom, there is evidence of greater gains for bidder's and target's shareholders in the presence of cross-border versus domestic transactions (Danbolt & Maciver, 2012). In the presence of cross-border M&A, the bidder's shareholders had abnormal positive returns (Francis, Hasan, & Sun, 2008). In Switzerland, during the period 1990 and 2001, there is clear evidence that the acquisitions made by Swiss companies in other countries created significant value for shareholders (Lowinski, Schiereck, & Thomas, 2004).

In contrast, other authors show a negative impact on the returns of bidder's shareholders (Moeller & P.Schlingemann, 2005), (Goddard, 2012), (Jensen & Ruback, 1983). A study of public companies shows that bidders experience negative returns when acquiring public companies, with the returns being much higher for targets (Fuller & Stegemoller, 2002).

## **2.3. Determinants of Cross-border mergers and acquisitions**

There is an extensive literature on the determinants of cross-border mergers and acquisitions.

### **2.3.1. Cultural and Geographic Distance**

In a study of cross-border mergers and acquisitions in private companies in the US, there is evidence that the costs of such transactions are higher when there are larger cultural and geographical differences between two companies (Erel, Liao, & Michael S., 2012). Despite increasing globalization, there are still differences regarding religion and language. Therefore, there is increased costs for these transactions when such differences exist between two companies from different countries. Another fact is that when the cultural distance is higher between two countries, there is a decrease in cross-border M&A deals (Ahern, Daminelli, & Fracassi, 2012). Cultural distance is measured by the cultural dimensions presented by Hofstede (2011). The cultural dimensions are “individualism (IDV), power distance (PDI), masculinity (MAS), uncertainty avoidance (UAI), and long-term orientation (LTO)” (Hofstede, 2011). Therefore, cultural distance affects cross-border M&A transactions negatively (Alexandridis, Nikolaos, & Nickolaos, 2017). Furthermore, it is shown that target premiums and national cultural distance have an asymmetric relationship among cross-border M&As (Lim, Makhija, & Shenkar, 2016). Regarding geographical distance, some results negatively impact the wealth created for shareholders (Boateng, 2019), (Ragozzino, 2009).

### **2.3.2 Language**

Language is an essential factor in achieving M&A transactions as well as other business deals, where it helps create relationships between shareholders in companies from different countries (Welch & Piekkari, 2005). Moreover, most of the cross-border M&A deals happen in countries that speak the same language (Rossi & Volpin, 2004).

## **2.4 Other deal characteristics**

The cash payments impacts the wealth created for bidders and target shareholders. A study of 167 transactions for bidders shows that cash payments have a positive or zero impact on returns (Travlos, 1987). Between 1980 and 2001, there is evidence that the reaction of deal stocks to M&A announcements is positive for acquirers. Contrarily, they react negatively and statistically different from zero when the deals are announced (Moeller & Frederick, 2004). When transactions

are made in cash only, there is a positive effect on shareholder returns (Eckbo & Thorburn, 2000). Usually, stock payments leads to negative returns for shareholders caused by the decrease in demand for the stock and its equity issues price, since the bidder's shares are undervalued, requiring consideration of the evolution of the bidder's shares at the announcement of the M&A deal (Andrade, Mitchell, & Stafford, 2001), (Moeller & Frederick, 2004). On the other hand, transactions made solely by all-stock payment tend to destroy the wealth of the shareholders involved (Goergen & Renneboog, 2004). Several studies find that the attitude of the deal has an impact on shareholder wealth. In the case of tender offers, there is a positive impact on shareholder wealth, while hostile offers negatively impact the returns for bidders and targets at the time of M&A announcement (Goergen & Renneboog, 2004), (Ruback, 1983). In most studies, the results regarding the impact of deal value have a negative impact on shareholder wealth, meaning that the higher the deal value, the lower the returns to shareholders (Moeller & Schlingemann, 2005). Shareholder returns vary inversely with deal value, more specifically for acquiring companies, especially when bidders are developed countries where bid value tends to be higher. In the industry variable mentioned in the dissertation as relatedness, there are significant positive returns for companies in the same industry. In addition to these results, it is known that companies that intend to diversify, i.e., expand into another type of market, due to their lack of experience in that market, end up experiencing negative cumulative returns (Martynova & Renneboog, 2006). Other authors argue that there are negative returns for companies that acquire companies with unrelated industries (Doukas & Travlos, 1988). In the literature available, there are different results about the impact of the relative size on the cumulative abnormal returns for shareholders (Travlos, 1987). In the case of bidder's shareholders, there is evidence of a negative impact on their wealth. The market-to-book (MTBV) ratio positively affects shareholder wealth, as higher stock contributes to better performance (Du & Boateng, 2015).



### 3. Research Hypotheses

Based on the literature review, there are different findings on the impact of bidder's and target's shareholders. Target's shareholders experience higher returns than bidders. Regarding cultural distance and geographical distance, there is a negative impact on CARs, and language positively affects shareholders' wealth.

Based on the literature review and the objectives of the dissertation, the following hypotheses are formulated:

#### **Hypotheses:**

#### **H1: Cross-border mergers and acquisitions announcement returns are:**

- H1a: negative for bidder's shareholders.
- H1b: positive for target's shareholders.

#### **H2: Cross-border mergers and acquisitions announcement returns are:**

- H2a: higher for bidders companies with smaller corporate cultural distance.
- H2b: higher for target companies with smaller corporate cultural distance

#### **H3: Cross-border mergers and acquisitions announcement returns are:**

- H3a: higher for bidders companies with smaller geographic distances.
- H3b: higher for target companies with smaller geographic distances.

#### **H4: Cross-border mergers and acquisitions announcement returns are:**

- H4a: higher for bidders companies from the same language.
- H4b: higher for target companies from the same language.

## 4. Methodology and Data

In this section, the necessary steps such as data processing, results, the statistical models created, and how the variables are used to measure the impact of cross-border mergers and acquisitions on shareholder wealth are discussed in detail.

### 4.1. Methodology

#### 4.1.1. Event study

The event study enables the measurement of abnormal shareholder returns. In this case, the announcement of cross-border mergers and acquisitions in developed countries causes a change in stock prices, reflecting positive or negative returns. The first step is to identify the event of interest, in this case, cross-border mergers and acquisitions in developed countries (MacKinlay, 1997).

The second step is to choose the event window where companies' stock prices from developed countries are analyzed over a specified period (MacKinlay, 1997). In the announcement of cross-border mergers and acquisitions, the time of the event is referred to as day 0. The event window used is (-5,+5) based on the literature review. However, the (-1,+1) and (-2,+2) windows are added to complement the results of the cumulative abnormal returns, capturing the different stock price reactions five days before and after the announcement.

After the chosen event window (-5,+5), the abnormal returns of the companies are estimated, in other words, the companies returns minus the companies normal return on day  $t$  ( $AR_{it} = R_{it} - E(R_{it} | X_{it})$ ). The return index used is obtained from the Datastream based on the list of bidders and targets extracted from the SDC Platinum.

The market model is used to estimate the expected returns. The returns are computed using the ordinary least squares (OLS). The market model is similar to the CAPM model, not using a risk-free rate in the equation intercept  $R_i = b_0 + b_1 RM + \varepsilon$ , assuming a linear relationship between the market return and the security return (MacKinlay, 1997). The estimation window used is five days before and after the announcement of cross-border mergers and acquisitions.

Using the formula ( $AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t}$ ) we obtain the average daily abnormal returns on event day  $t$ . Cumulative average abnormal returns ( $CAAR_T = \sum_{t=1}^T AAR_t$ ) are computed, to verify the effect of M&A announcements on shareholders wealth.

According to the literature review, parametric tests on abnormal returns calculated on the announcement of cross-border mergers and acquisitions in developed countries are performed. In the study, parametric t-test (Brown & Warner, 1985) and the BMP t-test are used (Corrado & Truong, 2008), (Campbell & Wesley, 1993).

#### 4.2.1 Regression Model

To analyze the variables that impact the cumulative abnormal returns for shareholders, regression models are created, where it includes the dependent variable (CAR), independent variables such as cultural distance, geographic distance, language. Deal value, relative size, relatedness, tender offers, cash, market value and, market-to-book are used as control variables.

## 4.2. Variables

### 4.2.1 Independent Variables

#### Cultural Distance

Cultural distance is a determinant of cross-border M&A, as referenced in the literature review. This independent variable is calculated through scores given on five dimensions: individuality, masculinity, uncertainty avoidance, power distance, and long-term orientation (Hofstede, 1980). To identify this cultural distance between two countries, the equation  $CulturalDistance_{BT} = \sqrt{\sum_{i=1}^4 (C_{iB} - C_{iT})^2}$  suggested is implemented (Kogut & Singh, 1988).  $C_{iB}$  and  $C_{iT}$  is the average score of the bidder's and target's country, respectively, taking into account the five culture distance dimensions. The cultural dimension scores are extracted from the Hofstede Database considering the Cultures and Organizations 3rd edition 2010.

#### Geographical Distance

Geographical distance is used since the study is about cross-border M&A, and it is vital to understand the impact beyond cultural distance. The latitude and longitude of the bidders and target countries were taken from EzGeoCode. Geographical distance is calculated from latitude and longitude in kilometers, with the following equation:

$$ACOS(SIN(lat1) * SIN(lat2) + COS(lat1) * COS(lat2) * COS(lon2 - lon1)) * 6371000.$$

## **Language**

Language is a dummy variable where when two companies speak the same language, the value one is assigned and zero otherwise.

### **4.3.2. Control Variables**

The following control variables are used:

#### **Cash:**

Cash is a dummy or categorical variable assigned a value of one if the deal is executed with 100% cash and zero otherwise (SDC).

#### **Tender Offer:**

Tender offer is a dummy variable assigned a value of one if the deal is a tender offer and zero otherwise (SDC).

#### **Deal Value:**

The deal value is a control variable retrieved through the SDC Platinum database.

#### **Relatedness:**

The relatedness variable is a dummy variable. It assigns the value one if the two companies operate in the same industry based on the first two digits of the SIC code and zero others (SDC).

#### **Relative Size:**

The relative size of the bidders and targets is calculated using the ratio between the total assets of the two companies one year before the announcement through Worldscope Datastream.

#### **MV:**

The market value of the bidders and target companies is taken from Worldscope Datastream before the deal is announced in millions of dollars.

#### **MTBV:**

The market-to-book ratio is computed using the market value of equity divided by the book value of assets in the year before the transaction's announcement through Worldscope.

### 4.3. Data and Sample

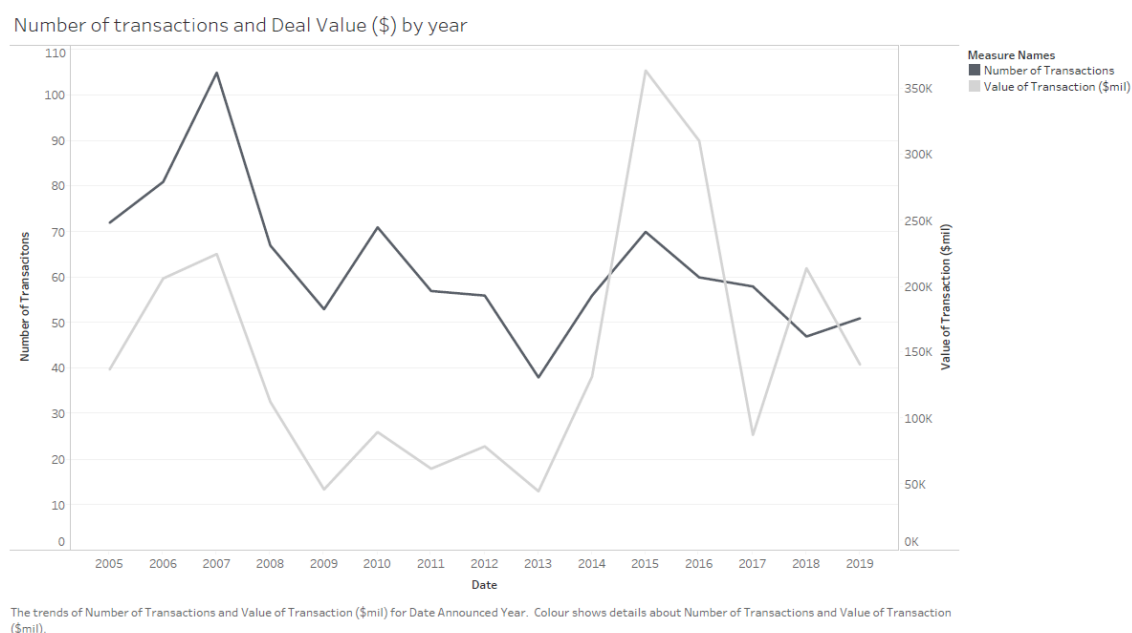
For this study, a sample of public companies was selected from 23 developed countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, USA, and United Kingdom) between 2005 and 2019. According to MSCI Developed Markets Indexes, the countries were chosen. Data on mergers and acquisitions transactions are collected from the SDC Platinum database.

To collect data on cross-border M&A deals in developed countries, the sample includes transactions of which the target company is part of the 23 countries presented by MSCI. To be included in the sample, M&A deals must meet the following criteria in SDC: (1) The announced period is from 2005 to 2019. (2) The deal value is at least 1 million dollars. (3) Bidders and targets are publicly listed companies. (4) The acquirer must own less than 50% of the target's company's shares before the deal is completed. (5) The acquirer must hold at least 50% of the target's company's shares after the announcement of the deal. (6) The transaction must be completed.

The information on daily stock prices for cross-border M&A deals is collected from Datastream. The data cover a total of 942 cross-border M&A transactions. Of these transactions, data on daily stock value was only available for 803 transactions of the bidder's and 588 for the target's companies. Besides, the variables with missing data are eliminated to analyze the regression models and the remaining results.

Descriptive statistics are analyzed concerning the deal variables, the distribution of acquiring and target companies, and the trend in turnover from 2005 to 2019. The study includes a sample of 942 cross-border mergers and acquisitions in developed countries. In terms of the number of transactions, there was initially a slight increase between 2005 and 2007, then a significant decrease between 2007 and 2009, suggesting the negative impact of the financial crisis in 2008. Uneven development was observed between 2009 and 2013, with the most significant increase in the study period being between 2013 and 2015. Finally, between 2015 and 2019, it dropped by 24% compared to the previous year. With respect to transaction value, there is a sudden decrease after 2007. Between 2013 and 2015, there is the most significant growth of the value of transaction and a sharp decline after that year, but still maintaining a transaction value above the financial crisis period. We can conclude that the value of transactions follows the number of transactions in a linear pattern.

Figure 1. Volume and value of cross-border M&A transactions by year 2005-2019



## Bidders

Regarding the bidder's companies from Canada, the USA, and the UK, they represent 33% of 942 deals. The American continent represents a large portion of M&A deals. In Europe, France and Germany have the largest weights. Other country statistics can be found in Appendix 1.

Table 1. Leading bidding countries

	Leading bidding countries	% of transactions
US	United States	15.9
CA	Canada	9.2
UK	United Kingdom	7.4
FR	France	3.6
JP	Japan	3.4

Table 2 contains the distribution of the leading bidder industries. It can be noted that the Mining industry represents the most significant percentage of these deals (15.5%). All companies with more than 50 deals were included in the table and represented 61.46% of the total.

Table 2. Leading bidding industries

Leading bidding industries	% of Transactions
Mining	15.5
Drugs	11.8
Business Services Drugs	6.4
Electronic and Elect.	6.2
Measuring, Medical	5.9
Prepackaged Software	5.6
Oil and Gas; Petrole.	5.5
Investment & Comm.	4.6

## Targets

Canada and the United States represent 25,2% of the target companies from developed countries. In Europe, the United Kingdom has the highest proportion, followed by France. Other country statistics can be found in Appendix 1.

Table 3. Leading target's countries

Leading target's countries	% of transactions
US United States	15.9
CA Canada	9.2
JP Japan	3.4
UK United Kingdom	7.4
FR France	3.6

Regarding the leading industries of the target companies, as with the acquirers, it can be seen that the mining and drugs industry has the highest weight in the total of cross-border M&A transactions.

Table 4. Leading target's industries

Leading target's industries	% of Transactions
Mining	17.4
Drugs	11.6
Business Services	8.0
Prepackaged Software	7.8
Electronic and Elect	6,5
Measuring, Medical	5.9
Oil and Gas; Petrole	5.8
Investment & Comm	4.0

Table 5 presents the descriptive statistics for all variables used in the regressions. The cash dummy variable has a mean of 0.61 and a standard deviation of 0.48, suggesting that most

transactions are done by cash only. The cultural distance has an average score of 36.2, taking into account the classification of Hofstede's five cultural dimensions. Deal value reports an average of 1739.943 million dollars, although the maximum is 101475.8 million dollars. The average geographical distance is 6496km, suggesting that the cross-border study can detect deviations in cultural values, such as political, economic, and social factors. Language is a dummy variable with an average of 0.46. It is concluded that almost half of the deals made between bidders and targets have a common language.

The bidder's Market-to-Book Value (MTBV) is on average 2.59 with a maximum of 20.6, while the target's ratio is on average 4.99 and a standard deviation of 39.23. This means that the investment in the target's companies will be expensive, as it has a ratio greater than 3. In addition, the bidders market value (MV) one year before the deal announcement is on average 22166.21, clearly higher than the target's (2199.83), and a maximum of 319020.5 and 80143.69, respectively. This may suggest that bidder's have greater power in the market and seek to increase their market value.

The relatedness variable suggests that on average 66.8% of the companies operate in the same industry. Furthermore, the relative size of bidders has an average of 442.72, while the relative size of targets has an average of 0.41, as bidders have a larger number of assets. Lastly, the Tender Offer variable has a mean of 0.95 and a standard deviation of 0.22.

Table 5. Summary Statistics of deal variables

Variables	n	mean	sd	median	min	max
Cash	743	0.611036	0.487843	1	0	1
Cultural Distance	942	36.21893	24.94949	27.23968	6.557439	114.9913
Deal Value	942	1739.943	5487.487	276.412	1	101475.8
Geographic Distance	942	6496.267	4414.372	6830.403	371.8121	18364.1
Language	743	0.45895	0.498648	0	0	1
MTBV Bidders	748	2.591845	2.586142	2.04	-24.35	20.86
MTBV Targets	588	4.991514	39.23251	2.445	-209.28	871.3
MV Bidders	756	22166.21	41397.63	5565.797	0.61	319020.5
MV Targets	588	2199.825	6205.948	312.864	1.251	70143.69
Relatedness	743	0.66891	0.470922	1	0	1
Relative Size	942	442.7271	5302.356	9.033654	0	125064
Tender Offer	743	0.948856	0.22044	1	0	1



## 5. Empirical Results and Discussion

In this section, the results regarding the cumulative abnormal returns for bidder's and target's shareholders are analyzed, as well as the determinants that most affect cross-border mergers and acquisitions in developed countries.

### 5.1. Shareholders Wealth Effects Analysis

To further examine the hypothesis of the impact of cross-border M&A announcements on the wealth of bidder's and target's shareholders, the event windows (-1,+1), (-2,+2), and (-5,+5) were used according to the methodology presented to estimate the cumulative abnormal returns and perform their analysis.

***H1a: Cross-border mergers and acquisitions announcement returns are negative for bidder's shareholders.***

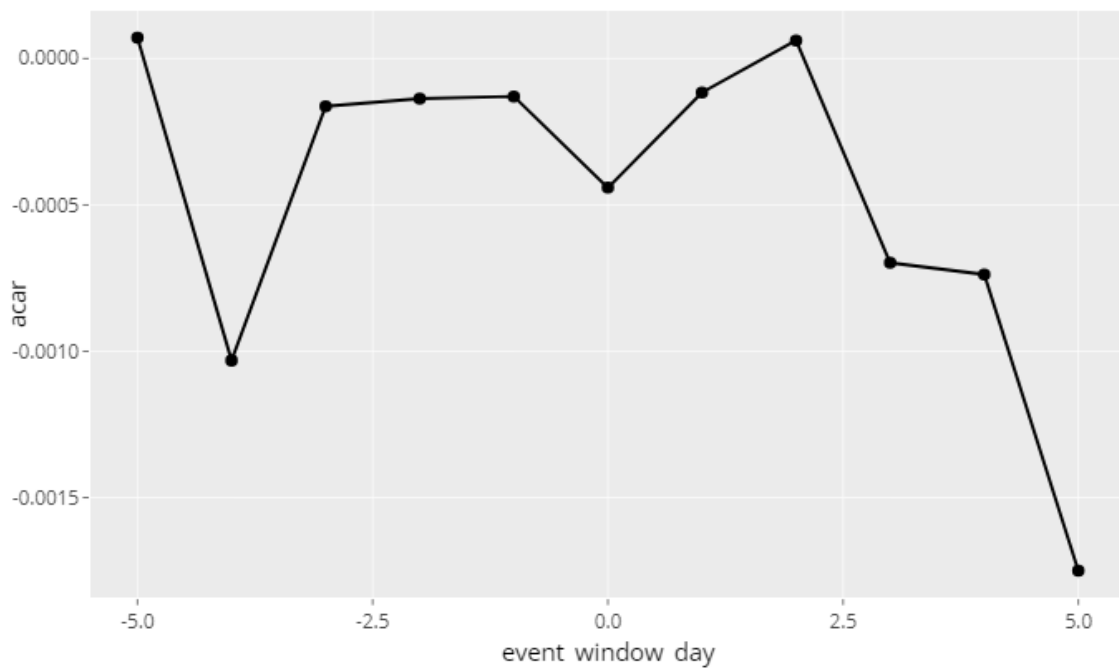
Table 6 presents the cumulative abnormal returns (CAR) on the last day for the event windows provided. The event window (-1,+1) shows a CAR close to zero for bidder shareholders (0.002%) one day after the announcement and not statistically significant at the 5% significance level using the cross-section and BMP test. Thus, the null hypothesis is not rejected, and it is concluded that bidder shareholders do not react to the cross-border M&A announcement. In the event window (-2,+2), the same pattern is observed where the cumulative abnormal returns are approximately zero (0.022%) and not statistically significant at the 5% significance level. The standard deviation is 0.073, and the t-test is 0.087, thus concluding that the hypothesis that bidders react negatively to the cross-border M&A announcement is not rejected.

In the wider window (-5,+5), we observe negative cumulative abnormal returns (-0.18%) five days after the announcement, suggesting that shareholder bidders react negatively. The T-test and BMP test again suggest that hypothesis 1a is rejected, and we conclude that bidding shareholders do react negatively to cross-border mergers and acquisitions five days after the announcement day. The results are in line with the literature review wherein the majority there is evidence of zero or negative cumulative abnormal returns (Moeller & P.Schlingemann, 2005), (Goddard, 2012), (Jensen & Ruback, 1983). All other results for the three-event windows are presented in Appendix 2.

Table 6. Bidder's Shareholders CAR

Event Window	ACAR	Sd	N	T-Statistic	P-value	BMP T-statistic	BMP (P-Value)
(-1,+1)	0.0020470	0.0670172	803	0.0086553	0.9930963	0.2454210	0.806194
(-2,+2)	0.0002251	0.0735948	803	0.0866875	0.9309416	0.0141812	0.014181
(-5,+5)	-0.1750186	0.0931961	803	-0.5321622	0.5947610	-15.089412	0.000000

Figure 2. Bidder's Shareholders CAR



This chart shows the average cumulative abnormal return (ACAR) for the event window (-5,+5), where it is possible to analyze the market reaction to the announcement of M&A transactions.

***H1b: Cross-border mergers and acquisitions announcement returns are positive for target's shareholders.***

Table 7 provides the cumulative abnormal returns (CAR) on the last day after the announcement for all event windows. The event window (-1,+1) exhibits a positive CAR for target shareholders (28.17%) one day after the announcement and statistically significant at the 5% significance level. Thus, the null hypothesis is rejected, and it is concluded that target shareholders do not react positively to the cross-border M&A announcement. In the (-2,+2) event window, it is verified that the cumulative abnormal returns show a positive CAR (29.16%) and statistically significant at the 5% significance level. The standard deviation is 0.34, and the t-test is 20.20, thus

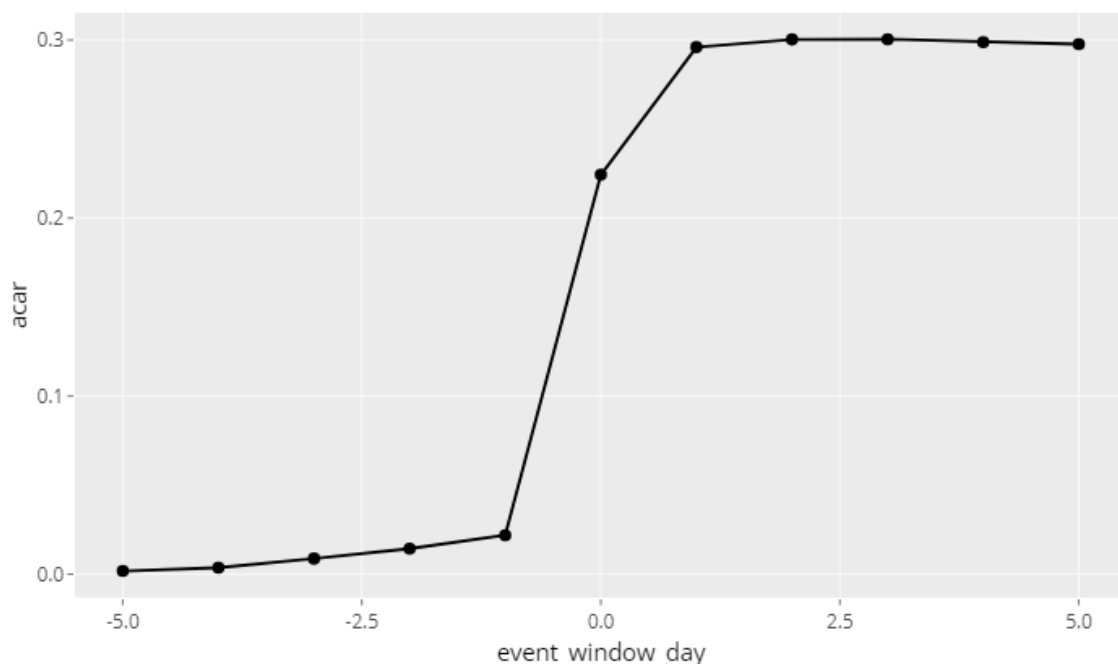
concluding that the hypothesis that targets react positively to the cross-border M&A announcement is rejected.

The cumulative abnormal returns (CAR) of the target shareholders are positive (29.8%) and statistically significant at the 5% significance level, based on the T-test and BMP test, five days after the announcement day. On the other hand, the BMP test suggests that the null hypothesis is incorrect. The p-value again suggests that hypothesis 1b is rejected, and we conclude that target shareholders do not react positively to cross-border M&A announcements in all event windows. There is clear evidence that in public companies, returns are much higher for shareholder targets, being consistent with the results (Fuller & Stegemoller, 2002). All other results for the event windows presented are presented in Appendix 2.

Table 7. Target's Shareholders CAR

Event Window	ACAR	Sd	N	T-statistic	P-value	BMP T-statistic	BMP (P-Value)
(-1,+1)	0.2817391	0.3500823	588	19.5148702	0.00	473.613357	0.000000
(-2,+2)	0.2916123	0.3499914	588	20.2036000	0.00	490.328383	0.000000
(-5,+5)	0.2976605	0.3521767	588	20.4950580	0.00	497.401885	0.000000

Figure 3. Target's Shareholders CAR



This chart shows the average cumulative abnormal return (ACAR) for the event window (-5,+5), where it is possible to analyze the market reaction to the announcement of M&A transactions.

## **5.2. Regression Results**

This section includes the analysis of the results concerning hypotheses 2, 3, and 4 estimated by the multiple linear regression models. The models include the dependent variable (CAR) one, two, and five days after the announcement calculated previously and the independent and control variables mentioned in the section. The purpose is to test the null hypothesis concerning cultural distance, geographical distance, and language between the bidder's and target's companies.

**Table 8. Hypotheses H2: Regression of cultural distance (-1,+1)**

The dependent variable is the cumulative abnormal returns (CAR) in the event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

	Cultural Distance					
	(-1, +1)					
		Bidders			Targets	
	(1)	(2)	(3)	(4)	(5)	(6)
CulturalDistance	-0.003 (0.008)	-0.003 (0.008)	0.008 (0.010)	0.068 (0.050)	0.066 (0.051)	0.045 (0.054)
Relatedness		-0.001 (0.005)	-0.002 (0.006)		0.001 (0.035)	-0.009 (0.036)
Cash		0.002 (0.005)	-0.001 (0.006)		0.003 (0.033)	0.002 (0.035)
TenderOffer		0.017 (0.013)	0.029** (0.014)		-0.022 (0.087)	-0.009 (0.091)
RelativeSize		0.002 (0.004)	0.001 (0.004)		-0.011 (0.021)	-0.020 (0.024)
DealValue		0.0003 (0.001)	0.0001 (0.001)		-0.002 (0.008)	0.031 (0.029)
MV Bidders			-0.0004 (0.001)			0.016** (0.008)
MTBV Bidders			-0.001 (0.003)			-0.013 (0.020)
MV Targets			0.0004 (0.001)			-0.035 (0.028)
MTBV Targets			0.003 (0.003)			-0.028* (0.017)
Constant	0.008 (0.012)	0.004 (0.015)	-0.012 (0.022)	0.183** (0.076)	0.204** (0.098)	0.148 (0.124)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.0002	0.004	0.013	0.004	0.005	0.023
Adjusted R <sup>2</sup>	-0.001	-0.005	-0.008	0.002	-0.007	0.003
Residual Std. Error	0.065 (df = 701)	0.065 (df = 696)	0.060 (df = 481)	0.360 (df = 519)	0.362 (df = 514)	0.366 (df = 481)
F Statistic	0.157 (df = 1; 701)	0.420 (df = 6; 696)	0.613 (df = 10; 481)	1.844 (df = 1; 519)	0.390 (df = 6; 514)	1.134 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 9. Hypotheses H2: Regression of cultural distance (-2,+2)**

The dependent variable is the cumulative abnormal returns (CAR) in the event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

	Cultural Distance					
	(-2, +2)					
		Bidders			Targets	
	(1)	(2)	(3)	(4)	(5)	(6)
CulturalDistance	-0.007 (0.009)	-0.007 (0.009)	-0.005 (0.012)	0.061 (0.050)	0.058 (0.051)	0.041 (0.054)
Relatedness		0.003 (0.006)	0.004 (0.007)		-0.007 (0.035)	-0.014 (0.036)
Cash		0.004 (0.006)	0.006 (0.007)		-0.015 (0.033)	-0.014 (0.035)
TenderOffer		0.008 (0.015)	0.0001 (0.017)		-0.037 (0.087)	-0.023 (0.091)
RelativeSize		-0.0003 (0.004)	0.002 (0.004)		-0.023 (0.021)	-0.033 (0.024)
DealValue		-0.0002 (0.001)	-0.00002 (0.002)		-0.0004 (0.008)	0.028 (0.029)
MV Bidders			0.0002 (0.002)			0.017** (0.008)
MTBV Bidders			0.001 (0.004)			-0.015 (0.020)
MV Targets			-0.003* (0.002)			-0.031 (0.028)
MTBV Targets			-0.001 (0.003)			-0.026 (0.017)
Constant	0.013 (0.014)	0.010 (0.017)	0.017 (0.027)	0.204*** (0.076)	0.235** (0.098)	0.167 (0.124)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.001	0.002	0.009	0.003	0.006	0.026
Adjusted R <sup>2</sup>	-0.001	-0.006	-0.011	0.001	-0.006	0.006
Residual Std. Error	0.074 (df = 701)	0.074 (df = 696)	0.074 (df = 481)	0.360 (df = 519)	0.362 (df = 514)	0.366 (df = 481)
F Statistic	0.594 (df = 1; 701)	0.275 (df = 6; 696)	0.450 (df = 10; 481)	1.491 (df = 1; 519)	0.482 (df = 6; 514)	1.272 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 10. Hypotheses H2: Regression of cultural distance (-5,+5)**

The dependent variable is the cumulative abnormal returns (CAR) in the event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

<b>Cultural Distance</b>						
(-5, +5)						
	Bidders			Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
CulturalDistance	-0.011 (0.011)	-0.012 (0.011)	-0.010 (0.015)	0.062 (0.051)	0.057 (0.051)	0.042 (0.055)
Relatedness		0.002 (0.008)	0.002 (0.009)		-0.018 (0.035)	-0.026 (0.037)
Cash		0.008 (0.007)	0.011 (0.009)		0.001 (0.034)	0.002 (0.035)
TenderOffer		0.001 (0.019)	-0.013 (0.022)		-0.041 (0.088)	-0.021 (0.092)
RelativeSize		-0.001 (0.005)	0.001 (0.006)		-0.022 (0.021)	-0.035 (0.024)
DealValue		-0.001 (0.002)	-0.001 (0.002)		-0.0004 (0.008)	0.027 (0.029)
MV Bidders			-0.002 (0.002)			0.017** (0.008)
MTBV Bidders			-0.004 (0.005)			-0.019 (0.020)
MV Targets			-0.003 (0.002)			-0.029 (0.028)
MTBV Targets			-0.002 (0.004)			-0.025 (0.017)
Constant	0.017 (0.017)	0.019 (0.022)	0.054 (0.035)	0.209*** (0.077)	0.240** (0.099)	0.172 (0.125)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.001	0.004	0.015	0.003	0.006	0.027
Adjusted R <sup>2</sup>	-0.0001	-0.005	-0.006	0.001	-0.006	0.007
Residual Std. Error	0.093 (df = 701)	0.093 (df = 696)	0.095 (df = 481)	0.363 (df = 519)	0.364 (df = 514)	0.368 (df = 481)
F Statistic	0.925 (df = 1; 701)	0.432 (df = 6; 696)	0.714 (df = 10; 481)	1.520 (df = 1; 519)	0.516 (df = 6; 514)	1.336 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### 5.2.1. Hypothesis 2

*H2a: Cross-border mergers and acquisitions announcement returns are higher for bidders companies with smaller corporate cultural distances.*

*H2b: Cross-border mergers and acquisitions announcement returns are higher for target companies with smaller corporate cultural distances.*

The cultural distance does not exhibit significant values, and the coefficients of the shareholder proponents are close to zero, reflecting a slight impact on cumulative abnormal returns (CAR) for all event windows. The target shareholders show positive values for all event windows, showing that when there is a smaller cultural distance between two countries, the returns of the target shareholders from developed countries increase on average 6.2%, five days after the announcement. The observed results are not entirely in line with the literature review, since negative effects were expected for all shareholders (Alexandridis, Nikolaos, & Nickolaos, 2017). Since none of the coefficients are significant in the event windows presented, we can conclude that cultural distance has no impact on the wealth created for the bidders and target shareholders, respectively.

Bidders exhibit values close to zero in the event window (-5,+5), contrary to the targets that show an impact of -1.8% on cumulative abnormal returns (CAR) when the two companies operate in the same industry. We would expect significant positive results of the relatedness variable with CARs, and the fact that the coefficients are slightly negative may be due to the fact that companies want to expand in the market, to which negative returns are usually associated (Martynova & Renneboog, 2006). Bidders and targets experience close to zero returns when the transaction is made in cash only five days after the announcement. In the (-2,+2) window, there is evidence of small negative returns for targets (-1.4%). A one-unit increase in transactions made by the cash method of payment influences the bidder's CARs by 1.1% and 0.2% for targets, not significant at the 5% level of significance. The Tender Offer variable represents an impact of -1.3% on CARs in the event window (-5,+5) for bidders and -2.1% for targets. RelativeSize represents the ratio of total assets between bidders and targets, showing values close to zero for bidders and negative for target shareholders five days after the announcement. In the literature review, Deal Value has a negative impact on shareholder wealth. However, this study shows positive and non-significant coefficients for target shareholders in all event windows.

The bidders experience a null impact on cumulative abnormal returns. Market value, also



known as market capitalization, is very crucial to the competitive position of the companies in which shareholders participate, with coefficients close to zero for bidders and targets in all the windows in the previous tables. Regarding the MTBV variable, it shows insignificant coefficients for all event windows, with a null impact for bidders, while targets shareholders experience slightly negative values (-2.5%), although the authors discuss that it positively contributes to shareholder wealth (Du & Boateng, 2015). Finally, the R-squared value of all regressions ranges between 0.01% of 2.7%, indicating that the variance of the independent variable explains at most 2.7% of the variance of the dependent variable (CAR) for all the event windows. The high volatility of stock returns may explain this situation.

**Table 11. Hypothesis H3: Regression of geographic distance (-1,+1)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

<b>Geographic Distance</b>						
(-1, +1)						
	Bidders			Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
GeographicDistance	-0.003 (0.006)	-0.002 (0.006)	-0.002 (0.007)	0.014 (0.039)	0.010 (0.040)	-0.003 (0.042)
Relatedness		-0.001 (0.005)	-0.002 (0.006)		-0.002 (0.035)	-0.012 (0.036)
Cash		0.002 (0.005)	-0.001 (0.006)		0.002 (0.034)	0.002 (0.035)
TenderOffer		0.017 (0.013)	0.029** (0.014)		-0.026 (0.087)	-0.014 (0.091)
RelativeSize		0.002 (0.004)	0.001 (0.004)		-0.012 (0.021)	-0.021 (0.024)
DealValue		0.0003 (0.001)	0.0001 (0.001)		-0.003 (0.008)	0.031 (0.029)
MV Bidders			-0.0003 (0.001)			0.016** (0.008)
MTBV Bidders			-0.001 (0.003)			-0.012 (0.020)
MV Targets			0.0004 (0.001)			-0.036 (0.028)
MTBV Targets			0.002 (0.003)			-0.032* (0.017)
Constant	0.013 (0.023)	0.008 (0.024)	0.007 (0.029)	0.235 (0.146)	0.269* (0.156)	0.231 (0.176)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.0003	0.004	0.011	0.0002	0.001	0.022
Adjusted R <sup>2</sup>	-0.001	-0.005	-0.009	-0.002	-0.010	0.001
Residual Std. Error	0.065 (df = 701)	0.065 (df = 696)	0.060 (df = 481)	0.361 (df = 519)	0.362 (df = 514)	0.366 (df = 481)
F Statistic	0.192 (df = 1; 701)	0.418 (df = 6; 696)	0.547 (df = 10; 481)	0.120 (df = 1; 519)	0.120 (df = 6; 514)	1.063 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 12. Hypothesis H3: Regression of geographic distance (-2,+2)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

<b>Geographic Distance</b>						
(-2, +2)						
	Bidders			Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
GeographicDistance	-0.0005 (0.007)	-0.001 (0.007)	-0.003 (0.008)	0.022 (0.039)	0.019 (0.040)	0.003 (0.042)
Relatedness		0.003 (0.006)	0.005 (0.007)		-0.010 (0.034)	-0.017 (0.036)
Cash		0.004 (0.006)	0.006 (0.007)		-0.016 (0.034)	-0.015 (0.035)
TenderOffer		0.008 (0.015)	-0.0002 (0.017)		-0.040 (0.087)	-0.027 (0.091)
RelativeSize		-0.0002 (0.004)	0.002 (0.004)		-0.023 (0.021)	-0.033 (0.024)
DealValue		-0.0001 (0.001)	-0.00003 (0.002)		-0.001 (0.008)	0.028 (0.029)
MV Bidders			0.0002 (0.002)			0.017** (0.008)
MTBV Bidders			0.001 (0.004)			-0.014 (0.020)
MV Targets			-0.003* (0.002)			-0.031 (0.028)
MTBV Targets			-0.001 (0.003)			-0.030* (0.017)
Constant	0.004 (0.026)	0.003 (0.028)	0.019 (0.035)	0.216 (0.146)	0.258* (0.156)	0.221 (0.176)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.00001	0.002	0.009	0.001	0.003	0.025
Adjusted R <sup>2</sup>	-0.001	-0.007	-0.011	-0.001	-0.008	0.004
Residual Std. Error	0.074 (df = 701)	0.074 (df = 696)	0.074 (df = 481)	0.361 (df = 519)	0.362 (df = 514)	0.367 (df = 481)
F Statistic	0.004 (df = 1; 701)	0.176 (df = 6; 696)	0.444 (df = 10; 481)	0.300 (df = 1; 519)	0.300 (df = 6; 514)	1.214 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 13. Hypothesis H3: Regression of geographic distance (-5,+5)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

<b>Geographic Distance</b>						
(-5, +5)						
	Bidders			Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
GeographicDistance	-0.002 (0.009)	-0.003 (0.009)	-0.006 (0.011)	0.026 (0.040)	0.021 (0.040)	0.006 (0.042)
Relatedness		0.002 (0.008)	0.003 (0.009)		-0.021 (0.035)	-0.029 (0.036)
Cash		0.008 (0.007)	0.012 (0.009)		-0.0005 (0.034)	0.002 (0.035)
TenderOffer		0.0003 (0.019)	-0.014 (0.022)		-0.043 (0.088)	-0.025 (0.092)
RelativeSize		-0.001 (0.005)	0.001 (0.006)		-0.022 (0.022)	-0.035 (0.024)
DealValue		-0.001 (0.002)	-0.001 (0.002)		-0.001 (0.008)	0.027 (0.029)
MV Bidders			-0.002 (0.002)			0.017** (0.008)
MTBV Bidders			-0.004 (0.005)			-0.018 (0.020)
MV Targets			-0.003 (0.002)			-0.029 (0.029)
MTBV Targets			-0.002 (0.004)			-0.028* (0.017)
Constant	0.008 (0.033)	0.013 (0.035)	0.061 (0.045)	0.207 (0.147)	0.254 (0.157)	0.218 (0.177)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.0001	0.002	0.014	0.001	0.004	0.026
Adjusted R <sup>2</sup>	-0.001	-0.006	-0.006	-0.001	-0.008	0.006
Residual Std. Error	0.093 (df = 701)	0.093 (df = 696)	0.095 (df = 481)	0.363 (df = 519)	0.364 (df = 514)	0.368 (df = 481)
F Statistic	0.042 (df = 1; 701)	0.279 (df = 6; 696)	0.706 (df = 10; 481)	0.424 (df = 1; 519)	0.350 (df = 6; 514)	1.278 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### 5.2.2. Hypothesis 3

*H3a: Cross-border mergers and acquisitions announcement returns are higher for bidders companies with lesser geographic distances.*

*H3b: Cross-border mergers and acquisitions announcement returns are higher for target companies with lesser geographic distances.*

Although the cultural distance is essential and all its dimensions, it cannot capture the influence of geographical distance and therefore is used to develop the third hypothesis. Most transactions are between countries such as the US, Canada, and the UK. In the results presented in tables 11, 12, and 13, it is possible to notice that in all event windows, there are returns close to zero and insignificant, this is because there are a large number of companies from developed countries acquired by other companies from countries with the same economic and social characteristics. The results are not entirely in line with the literature review since negative returns were expected for all shareholders, i.e., the greater the geographic distance, the less wealth is generated for shareholders (Boateng, 2019), (Ragozzino, 2009). In the wider window (-5,+5), there is a slightly negative impact of -0.3% for the bidder's shareholders, contrary to the Targets that show returns of 0.6%.

The relatedness variable presents in its majority a negative impact for target shareholders. Bidders show values close to zero in the event window (-5,+5), contrary to the targets that show an impact of -2.9% on CARs when the two companies operate in the same industry. Compared to the literature review, positive interaction with the CARs would be expected since it facilitates companies already operating in that industry. Cash payment shows no impact in most event windows, with a slight negative impact for the shareholder's targets in event window (-1,+1). An increase of one unit of transactions made by the cash payment method influences the CARs by -1.5%, not being statistically significant at the five percent level in the event window (-2,+2). The literature review refers that cash payments have positive or no impact on returns (Travlos, 1987).

The Tender Offer variable represents an impact of -2.7% and -1.4% on CARs in the event windows (-2, +2) e (-5. +5) for target shareholders. RelativeSize represents the ratio of total assets between targets and bidders, shows values close to zero for bidders and negative for targets shareholders. However, the coefficient is statistically insignificant in the event window five days before and after the announcement. In the literature review, Deal Value has a negative impact on shareholder wealth, since the higher the value of the transaction, the lower the return to

shareholders (Moeller & Schlingemann, 2005). However, this study shows positive and non-significant coefficients for targets in all event windows. Thus, the bidders experience a null impact on their wealth.

Market value, also known as market capitalization, is crucial to the competitive position of the companies in which shareholders participate, with a null impact for bidders, in contrast to the positive impact on target shareholders' returns in the event windows presented.

Finally, regarding the MTBV variable, there is evidence of a null impact for bidders shareholders and slightly negative for targets (-2.8%) in the event window (-5,+5). The coefficient is significant for the target's shareholders in the event window (-5,+5), so there is an interaction with the CARs. The R-squared value of all regressions ranges between 0.3% and 2.6%, indicating that the variance of the independent variable explains at most 2.6% of the variance of the dependent variable (CAR) for the widest event window. The high volatility of stock returns may explain this situation.

**Table 14. Hypothesis H4: Regression of language (-1,+1)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

	Language					
	(-1, +1)					
		Bidders			Targets	
	(1)	(2)	(3)	(4)	(5)	(6)
Language	0.001 (0.005)	0.002 (0.005)	0.002 (0.006)	0.014 (0.032)	0.014 (0.033)	0.010 (0.034)
Relatedness		-0.002 (0.005)	-0.002 (0.006)		-0.003 (0.035)	-0.013 (0.036)
Cash		0.002 (0.005)	-0.001 (0.006)		0.005 (0.034)	0.003 (0.035)
TenderOffer		0.017 (0.013)	0.029** (0.014)		-0.026 (0.087)	-0.014 (0.091)
RelativeSize		0.002 (0.004)	0.001 (0.004)		-0.013 (0.021)	-0.021 (0.024)
DealValue		0.0004 (0.001)	0.0002 (0.001)		-0.002 (0.008)	0.031 (0.029)
MV Bidders			-0.0003 (0.001)			0.016** (0.008)
MTBV Bidders			-0.001 (0.003)			-0.012 (0.020)
MV Targets			0.0004 (0.001)			-0.035 (0.028)
MTBV Targets			0.002 (0.003)			-0.032* (0.017)
Constant	0.002 (0.003)	-0.002 (0.010)	-0.0004 (0.016)	0.278*** (0.022)	0.296*** (0.064)	0.213** (0.092)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.0001	0.004	0.011	0.0004	0.002	0.022
Adjusted R <sup>2</sup>	-0.001	-0.005	-0.009	-0.002	-0.010	0.001
Residual Std. Error	0.065 (df = 701)	0.065 (df = 696)	0.060 (df = 481)	0.361 (df = 519)	0.362 (df = 514)	0.366 (df = 481)
F Statistic	0.092 (df = 1; 701)	0.431 (df = 6; 696)	0.554 (df = 10; 481)	0.194 (df = 1; 519)	0.140 (df = 6; 514)	1.071 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 15. Hypothesis H4: Regression of language (-2,+2)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

	Language					
	(-2, +2)					
		Bidders			Targets	
	(1)	(2)	(3)	(4)	(5)	(6)
Language	-0.005 (0.006)	-0.005 (0.006)	0.002 (0.007)	0.011 (0.032)	0.011 (0.033)	0.004 (0.034)
Relatedness		0.003 (0.006)	0.004 (0.007)		-0.011 (0.035)	-0.018 (0.036)
Cash		0.003 (0.006)	0.006 (0.007)		-0.013 (0.034)	-0.014 (0.035)
TenderOffer		0.008 (0.015)	0.0001 (0.017)		-0.041 (0.087)	-0.027 (0.091)
RelativeSize		-0.00005 (0.004)	0.002 (0.004)		-0.024 (0.021)	-0.034 (0.024)
DealValue		-0.0003 (0.001)	0.0001 (0.002)		-0.0002 (0.008)	0.028 (0.029)
MV Bidders			0.0001 (0.002)			0.017** (0.008)
MTBV Bidders			0.001 (0.004)			-0.014 (0.020)
MV Targets			-0.003* (0.002)			-0.031 (0.028)
MTBV Targets			-0.001 (0.003)			-0.029* (0.017)
Constant	0.005 (0.004)	0.002 (0.011)	0.008 (0.020)	0.289*** (0.022)	0.316*** (0.064)	0.229** (0.093)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.001	0.002	0.009	0.0002	0.003	0.025
Adjusted R <sup>2</sup>	-0.0004	-0.006	-0.012	-0.002	-0.008	0.004
Residual Std. Error	0.074 (df = 701)	0.074 (df = 696)	0.074 (df = 481)	0.361 (df = 519)	0.362 (df = 514)	0.366 (df = 481)
F Statistic	0.686 (df = 1; 701)	0.272 (df = 6; 696)	0.439 (df = 10; 481)	0.118 (df = 1; 519)	0.283 (df = 6; 514)	1.215 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01



**Table 16. Hypothesis H4: Regression of language (-5,+5)**

The dependent variable is the cumulative abnormal returns (CAR) in the study event windows provided, using the market model. The explanatory and control variables are presented based on the methodology estimated by OLS. The table presents the variables' coefficients and the heteroscedastic standard errors in parentheses. The variables RelativeSize, MV, and MTBV, refer to the values from one year before the announcement.

	Language					
	(-5,+5)					
	Bidders			Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
Language	-0.007 (0.007)	-0.007 (0.007)	0.001 (0.009)	0.014 (0.032)	0.018 (0.033)	0.012 (0.035)
Relatedness		0.003 (0.008)	0.003 (0.009)		-0.022 (0.035)	-0.030 (0.036)
Cash		0.007 (0.008)	0.012 (0.009)		0.004 (0.034)	0.004 (0.035)
TenderOffer		0.001 (0.019)	-0.013 (0.022)		-0.044 (0.088)	-0.026 (0.092)
RelativeSize		-0.0002 (0.005)	0.001 (0.006)		-0.024 (0.021)	-0.036 (0.024)
DealValue		-0.001 (0.002)	-0.001 (0.002)		0.00004 (0.008)	0.027 (0.029)
MV Bidders			-0.002 (0.002)			0.017** (0.008)
MTBV Bidders			-0.004 (0.005)			-0.018 (0.020)
MV Targets			-0.003 (0.002)			-0.029 (0.029)
MTBV Targets			-0.001 (0.004)			-0.028* (0.017)
Constant	0.004 (0.005)	0.006 (0.014)	0.038 (0.026)	0.295*** (0.023)	0.316*** (0.064)	0.229** (0.093)
Observations	703	703	492	521	521	492
R <sup>2</sup>	0.001	0.003	0.014	0.0004	0.004	0.026
Adjusted R <sup>2</sup>	-0.0002	-0.005	-0.007	-0.002	-0.008	0.006
Residual Std. Error	0.093 (df = 701)	0.093 (df = 696)	0.095 (df = 481)	0.363 (df = 519)	0.364 (df = 514)	0.368 (df = 481)
F Statistic	0.875 (df = 1; 701)	0.390 (df = 6; 696)	0.669 (df = 10; 481)	0.186 (df = 1; 519)	0.354 (df = 6; 514)	1.289 (df = 10; 481)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### 5.2.3. Hypothesis 4

- H4: Cross-border mergers and acquisitions announcement returns are higher for bidders companies from the same language.
- H4: Cross-border mergers and acquisitions announcement returns are higher for target companies from the same language.

Table 10 shows the influence of the common language spoken between the firms and the control variables on the wealth created for shareholders. The language of the independent variable is not statistically significant in all event windows for all shareholders. The common language impacts on average only 1% of the CARs in all windows. As expected, language can facilitate deal completion by making the transaction more accessible, although as can be seen, it does not have that much impact, and this is since, in developed countries, the English language is predominant, unlike developing countries. Thus, we can conclude that there is no impact of common language on the wealth created by shareholders in developed countries. The results are inconsistent with the literature review, where there is evidence of positive and significant returns (Rossi & Volpin, 2004).

The relatedness dummy variable mostly shows a negative impact for target shareholders and zero for bidders, considering the wider window. Based on the literature review, one would expect a positive interaction with the dependent variable (CAR). Bidders and targets shareholders experience slightly positive returns when the transaction is made in cash only, consistent with the literature review.

The Tender Offer dummy variable represents a -1.3% impact on cumulative abnormal returns in the event window (-5,+5) for bidder shareholders, while targets report negative values. RelativeSize represents the ratio of total assets between bidders and targets, where it shows coefficients close to zero for bidders and negative for target shareholders in the event window (-5,+5). This study shows positive and non-significant coefficients for targets in all event windows. The bidders experience null impact in all event windows.

Market value shows zero impact on cumulative abnormal returns for bidders, in contrast to the negative impact on target shareholder wealth in the event windows provided. Finally, regarding the MTBV variable, it shows a negative and significant coefficient for the targets in all event windows, unlike the target shareholders who experience returns close to zero. The R-squared value of all regressions ranges between 0.1% and 2.6%, indicating that the variance of the independent

variable explains only 2.6% of the variance of the dependent variable (CAR). The high volatility of stock returns may explain this situation.

## 6. Conclusion and Limitations

The purpose of the study aims to analyze the effect on shareholders' wealth of cross-border mergers and acquisitions in developed countries between 2005 and 2019. Cross-border mergers and acquisitions represent between 20% and 30% of all transactions, where companies seek gains through these deals through strategic motivations, competitiveness, diversification, and also by obtaining economies of scale (Whitaker, 2016).

The methodology used to measure the wealth created for shareholders is the event study methodology. Additionally, we study the effect of cultural distance, geographic distance, and language on the wealth created for shareholders.

The results show that bidder shareholders have null cumulative abnormal returns and not statistically significant at the 5% significance level, following the authors (Moeller & P.Schlingemann, 2005), (Goddard, 2012), (Jensen & Ruback, 1983). On the other hand, there is evidence of significant positive returns (29.8%) for the target shareholders.

Cultural distance does not impact on the cumulative abnormal returns of shareholders, being statistically insignificant in all windows, based on Hofstede's five dimensions. When assessing the impact of geographic distance, it was also found to be non-significant, so there is no relationship with the dependent variable for the event windows used. To complement these two variables, language is essential because it can hinder the transaction process. When two companies have a common language, it can be observed that there is no impact on cumulative abnormal returns (CAR).

The limitations throughout the research are several, starting with the fact that there is not enough information in the Datastream database for daily stock data and the small number of cross-border transactions presented by SDC Platinum compared to domestic ones made the sample much smaller. The Worldscope data is also a hindrance, losing data when building the multiple regression models. The use of developed countries in the sample was also chosen because they contain more information than emerging countries.

The study focuses more on the cultural differences between countries that have played a significant role in mergers and acquisitions, although they lost steam after the 2008 financial crisis (IMAA Institute, 2021). Therefore it is suggested in the following research that can explore beyond the cultural context the economic context such as the impact of GDP and social factors that are

accurate to explain the effect of these variables on cross-borders and contribute to comprehensive research. Finally, I suggest extending the sample period since none of the variables are significant in order to better capture the results and their impact on cumulative abnormal returns (CAR).

## References

Agtmael, A. W. (2008). *The Emerging Markets Century: How a New Breed of World-class Companies is Overtaking the World*. Simon & Schuster.

Ahern, K. R., Daminelli, D., & Fracassi, C. (2015). Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*. *Journal of Financial Economics*, 117(1), 165-189.

Ahern, K., Daminelli, D., & Fracassi, C. (2012). Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*.

Alexandridis, G., Hoepner, A. G., & Oikonomou, I. (2015). The impact of corporate cultural distance on mergers and acquisitions. University of Reading.

Alexandridis, G., Nikolaos, A., & Nickolaos, T. (2017). Value creation from M&As: New evidence. *Journal of Corporate Finance*, 632-650.

Alexandridis, G., Petmezas, D., & Travlos, N. G. (2010). Gains from mergers and acquisitions around the world: New evidence. *Financial Management*. 39(4), 1671-1695.

Andrade, G., Mitchell, M., & Stafford, E. (2001). New evidence and perspectives on mergers. *Journal of economic perspectives*, 15(2), 103-120.

Asquith, P., Bruner, R. F., & Mullins Jr, D. W. (1983). The gains to bidding firms from merger. *Journal of financial economics*, 11(1-4), 121-139.

Bank W, C. (2017). International Bank for Reconstruction and Development. Washington DC: The World Bank.

Bhagat, S., M. Dong, D. H., & Noah, R. (2005). Do tender offers create value? New methods and evidence. *Journal of Financial Economics* 76, 3-60.

Boateng, A. e. (2019). Cultural distance and value creation of cross-border M&A: The moderating role of acquirer characteristics. *International Review of Financial Analysis* 63, 285-295.

Boehmer, E., Musumeci, J., & Poulsen, A. (1991). Event study methodology under conditions of event-induced variance. *Journal Finance Economics* , 30, 253–272.

Bris, A., Neil, B., & Christos, C. (2008). Adopting better corporate governance: Evidence from cross-border mergers. *Journal of Corporate Finance* 14.3, 224-240.

Brown, S. J., & Warner, J. B. (1985). Using daily stock returns: The case of event studies. *Journal of financial economics*, 14(1), 3-31.

Campbell, C. J., & Wesley, C. E. (1993). Measuring security price performance using daily NASDAQ returns. *Journal of Financial Economics*, Vol. 33, issue 1, 73-92.

Campbell, J., Lo, A., & MacKinlay, A. C. (1997). *The econometrics of financial markets*. Princeton University press.

Cheol S, E., Kolodny, R., & Scheraga, C. (1996). Cross-border acquisitions and shareholder wealth: Tests of the synergy and internalization hypotheses. *Journal of Banking & Finance*, 1559-1582.

Corrado, C. J., & Truong, C. (2008). Conducting event studies with Asia-Pacific security market data. *Pacific-Basin finance journal*, 16(5), 493-521.

Cretin, F., Dieudonné, S., & F.Bouacha, S. (2015). M&A Activity: Where Are We In. *Alternative Investment Analyst Review*.

Danbolt, J., & Maciver, G. (2012). Cross-border versus domestic acquisitions and the impact on shareholder wealth. *Journal of Business Finance & Accounting*, 39(7-8), 1028-1067.

Deng, X. J.-k.-1. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of financial Economics* 110.1, 87-109.

Dennis, D. K., & McConnell, J. J. (1986). Corporate mergers and security returns. *Journal of Financial Economics*, 16(2), 143-187.

DePamphilis, D. (2019). *Mergers, acquisitions, and other restructuring activities: An integrated approach to process, tools, cases, and solutions*. Academic Press.

Dong, Q. & -R. (2020). Cross-border acquisitions from developing countries under decreasing returns to scale. *Portuguese Economic Journal*, 1-21.

Doukas, J. (1995). Overinvestment, Tobin's Q and Gains from Foreign Acquisitions. *Journal of Banking & Finance*, 19(7), 1285-1303.

- Doukas, J., & Travlos, N. (1988). The effect of corporate multi-nationalism on shareholders wealth: Evidence from international acquisitions. *Journal of Finance*, Vol. 43, 1161–1175.
- Du, M., & Boateng, A. (2015). State ownership, institutional effects and value creation in cross-border mergers & acquisitions by Chinese firms. *International Business Review*, 24(3), 430-442.
- Eckbo, B. E., & Thorburn, K. S. (2000). Gains to bidder firms revisited: Domestic and foreign acquisitions in Canada. *Journal of Financial and Quantitative Analysis*, 1-25.
- Erel, I., Liao, R., & Michael S., W. (2012). Determinants of cross-border mergers and. *Journal of Finance*, 1045-1082.
- Eun, C. S., Kolodny, R., & Scheraga, C. (1996). Cross-border acquisitions and shareholder wealth: Tests of the synergy and internalization hypotheses. *Journal of Banking & Finance*, 20(9), 1559-1582.
- Fama, E. F. (1969). The Adjustment of Stock Prices to New Information. *International Economic Review*, 10(1) 1-21.
- Francis, B. B., Hasan, I., & Sun, X. (2008). Financial market integration and the value of global diversification: Evidence for US acquirers in cross-border mergers and acquisitions . *Journal of Banking & Finance* , 1522-1540.
- Fuller, K. N., & Stegemoller, M. (2002). What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *The journal of finance*, 57(4), 1763-1793.
- Goddard, J. P. (2012). Bank mergers and acquisitions in emerging markets: evidence from Asia and Latin America. *The European Journal of Finance* 18.5, 419-438.
- Goergen, M., & Renneboog, L. (2004). Shareholder Wealth Effects of European Domestic and Cross-border Takeover bids. *European Financial Management*, Vol. 10, No. 1, pp. 9-45.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. London: Sage Publications.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*. 2(1), 2307-0919.



IMAA Institute. (2021, May 23). Retrieved from Mergers and acquisitions statistics: <https://imaa-institute.org/mergers-and-acquisitions-statistics/>

Jensen, M. C., & Ruback, R. S. (1983). The Market for Corporate Control: The Scientific Evidence. *Journal of Financial Economics*, 5-50.

K.Oler, D., S.Harrison, J., & R.Allen, M. (2008). The danger of misinterpreting short-window event study findings in strategic management research: an empirical illustration using horizontal acquisitions. *Strategic Organization*, 6(2), 151-184.

Khanna, T., Palepu, K. G., & Bullock, R. J. (2010). *Winning in Emerging Markets: A Road Map for Strategy and Execution*. Harvard Business Press.

Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3), 411–432.

Kolari, J. W.-s. (2010). Event study testing with cross-sectional correlation of abnormal returns. *Review of Financial Studies*, 23, 3996–4025.

Kothari, S., & Warner, J. (1997). Measuring long-horizon security price performance. *Journal of Financial Economics*, 43: 301-339.

Lewellen, W., Loderer, C., & Rosenfeld, A. (1985). Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics*, 7(1-3), 209-231.

Lim, J., Makhija, A. K., & Shenkar, O. (2016). The asymmetric relationship between national cultural distance and target premiums in cross-border M&A. *Journal of Corporate Finance* 41, 542-571.

Lowinski, F., Schiereck, D., & Thomas, T. W. (2004). The Effect of Cross-Border Acquisitions on Shareholder Wealth - Evidence from Switzerland. *Review of Quantitative Finance and Accounting*, 315–330.

MacKinlay, A. C. (1997). Event studies in economics and finance. *Journal of economic literature*, 13-39.

Martynova, M., & Renneboog, L. (2006). Mergers and acquisitions in Europe. *Advances in corporate finance and asset pricing*, 13-75.

Martynova, M., & Renneboog, L. (2011). The Performance of the European Market for Corporate Control: Evidence from the Fifth Takeover Wave. Blackwell Publishing Ltd, Vol. 17. No. 2. p. 208 – 259.

McWilliams, A., & Donald, S. (1997). Event studies in management research: Theoretical and empirical issues. *Academy of management journal* McWilliams, Abigail; Siegel., Donald, 40.3: 626-657.

Moeller, S. S., & Frederick, S. R. (2004). Firm size and the gains from acquisitions. *Journal of Corporate Finance*, 73, 201–228.

Moeller, S., & Schlingemann, F. (2005). Global diversification and bidder gains: a comparison between cross-border and domestic acquisitions. *Journal of Banking and Finance* 29, 533-564.

MSCI. (2017). MSCI Country Classification Standard. MSCI.COM.

MSCI. (2020). MSCI GLOBAL MARKET ACCESSIBILITY REVIEW.

Peterson, P. P. (1989). Event studies: A review of issues and methodology. *Quarterly journal of business and economics*, 36-66.

Porta, R. L. (1998). Law and finance. *Journal of political economy* 106.6, 1113-1155.

Ragozzino, R. (2009). The effects of geographic distance on the foreign acquisition activity of US firms. *Management International Review*, 49(4), 509.

Rossi, S., & Volpin, P. F. (2004). Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*, 74(2), 277-304.

Ruback, R. S. (1983). Assessing Competition in the Market for Corporate Acquisitions. *Journal of Financial Economics* 11, pp 141-53.

Serra, A. P. (2002). Event Study Tests: A Brief Survey. *Working Papers de FEP*, 117, 1-15.

Travlos, N. G. (1987). Corporate takeover bids, methods of payment, and bidding firms' stock returns. *The Journal of Finance*, 42(4), 943-963.

UNCTAD. (2018). *World Investment Report*. Geneva.

UNDP. (2020). *Human development index (HDI)*. New York, USA.

Welch, D. W., & Piekkari, R. (2005). Speaking in Tongues : The Importance of Language in International Management Processes. *Int. Studies of Management & Organization*, vol. 35.

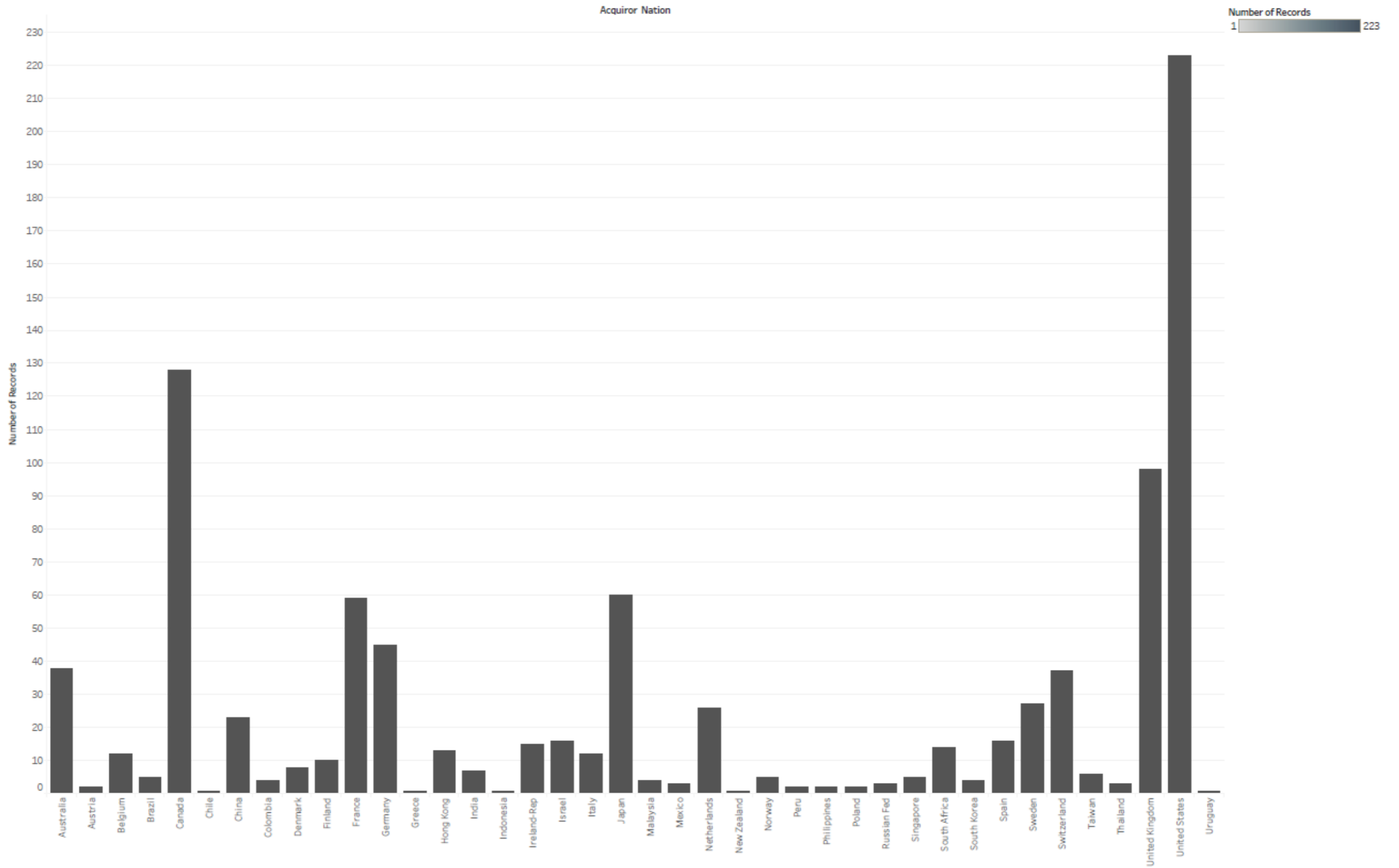
Whitaker, S. C. (2016). *Cross-border mergers and acquisitions*. John Wiley & Sons, 4-5.

Wong, A. &. (2009). The Effects of Merger and Acquisition Announcements on the Security Prices of Bidding Firms and Target Firms in Asia. . *International Journal of Economics and Finance*, 1(2), 274-283.

Zhang. X., D., & Wang, H. X. (2004). *International Investment and Multinational Corporation*.

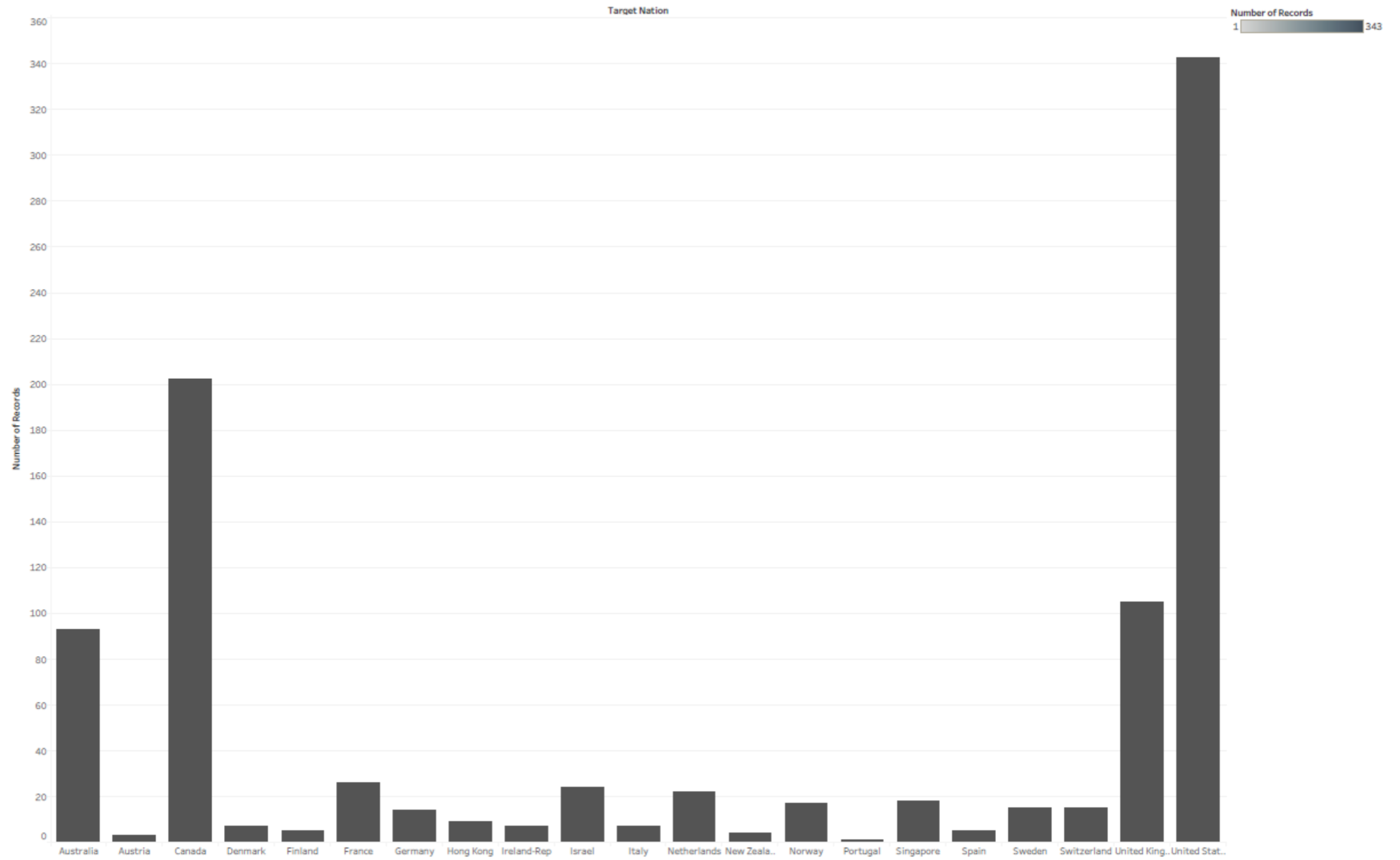
**Appendix**  
**Appendix 1**  
Appendix 1.1 - Bidder's Nation

Acquiror Nati..	
Australia	38
Austria	2
Belgium	12
Brazil	5
Canada	128
Chile	1
China	23
Colombia	4
Denmark	8
Finland	10
France	59
Germany	45
Greece	1
Hong Kong	13
India	7
Indonesia	1
Ireland-Rep	15
Israel	16
Italy	12
Japan	60
Malaysia	4
Mexico	3
Netherlands	26
New Zealand	1
Norway	5
Peru	2
Philippines	2
Poland	2
Russian Fed	3
Singapore	5
South Africa	14
South Korea	4
Spain	16
Sweden	27
Switzerland	37
Taiwan	6
Thailand	3
United Kingdom	98
United States	223
Uruguay	1

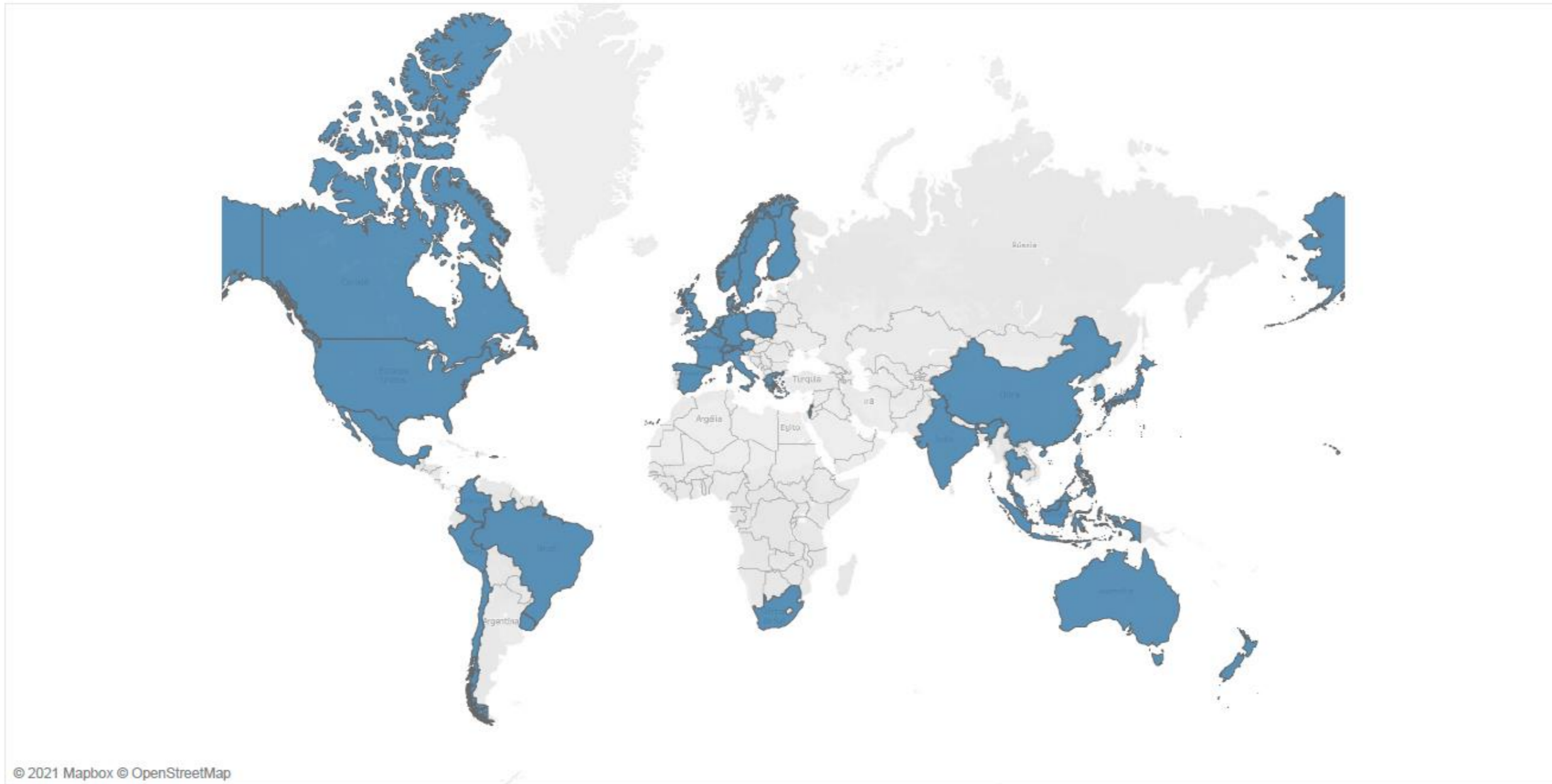


## Appendix 1.2 - Target's Nation

Target Nation	Number of Records
Australia	93
Austria	3
Canada	202
Denmark	7
Finland	5
France	26
Germany	14
Hong Kong	9
Ireland-Rep	7
Israel	24
Italy	7
Netherlands	22
New Zealand	4
Norway	17
Portugal	1
Singapore	18
Spain	5
Sweden	15
Switzerland	15
United Kingdom	105
United States	343



Appendix 1.3 – Bidder's Nation Map



Map based on Longitude (generated) and Latitude (generated). Details are shown for Acquiror Nation.



## Appendix 2 – Shareholder Returns

Appendix 2.1 - The average abnormal returns of bidding companies 1 day prior to and 1 day after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_acar	bmp_p_t_acar
-1	0.000007	0.000007	0.025053	0.025053	803.000000	803.000000	0.000884	0.000884	0.008360	0.993332	0.008360	0.993332	0.237037	0.812689
0	-0.000312	-0.000304	0.047398	0.053110	803.000000	803.000000	0.001672	0.001873	-0.186451	0.852138	-0.162457	0.870987	-4.606443	0.000005
1	0.000325	0.000020	0.045722	0.067017	803.000000	803.000000	0.001613	0.002364	0.201390	0.840444	0.008655	0.993096	0.245421	0.806194

Appendix 2.2 - The average abnormal returns of bidding companies 2 days prior to and 2 days after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_acar	bmp_p_t_acar
-2	0.000026	0.000026	0.024461	0.024461	803.000000	803.000000	0.000863	0.000863	0.030637	0.975567	0.030637	0.975567	0.868697	0.385273
-1	0.000007	0.000034	0.025053	0.033804	803.000000	803.000000	0.000884	0.001192	0.008360	0.993332	0.028364	0.977379	0.804266	0.421482
0	-0.000312	-0.000278	0.047398	0.057753	803.000000	803.000000	0.001672	0.002037	-0.186451	0.852138	-0.136419	0.891524	-3.868161	0.000119
1	0.000325	0.000047	0.045722	0.071416	803.000000	803.000000	0.001613	0.002519	0.201390	0.840444	0.018616	0.985152	0.527846	0.597752
2	0.000178	0.000225	0.030749	0.073595	803.000000	803.000000	0.001084	0.002595	0.164240	0.869583	0.086687	0.930942	2.458017	0.014181

Appendix 2.3 - The average abnormal returns of bidding companies 5 days prior to and 5 days after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_aar	bmp_p_t_aar	bmp_t_acar	bmp_p_t_acar
-5	0.00007	0.00007	0.02344	0.02344	803.00000	803.00000	0.00083	0.00083	0.08713	0.93059	0.08713	0.93059	2.47055	0.01370	2.47055	0.01370
-4	-0.00110	-0.00103	0.02519	0.03267	803.00000	803.00000	0.00089	0.00115	-1.24112	0.21492	-0.89453	0.37131	-35.19193	0.00000	-25.36433	0.00000
-3	0.00087	-0.00016	0.02436	0.03961	803.00000	803.00000	0.00086	0.00140	1.01015	0.31273	-0.11661	0.90720	28.64263	0.00000	-3.30633	0.00099
-2	0.00003	-0.00014	0.02446	0.04655	803.00000	803.00000	0.00086	0.00164	0.03064	0.97557	-0.08312	0.93377	0.86870	0.38527	-2.35696	0.01866
-1	0.00001	-0.00013	0.02505	0.05303	803.00000	803.00000	0.00088	0.00187	0.00836	0.99333	-0.06902	0.94499	0.23704	0.81269	-1.95711	0.05068
0	-0.00031	-0.00044	0.04740	0.07266	803.00000	803.00000	0.00167	0.00256	-0.18645	0.85214	-0.17200	0.86348	-5.28681	0.00000	-4.87703	0.00000
1	0.00032	-0.00012	0.04572	0.08187	803.00000	803.00000	0.00161	0.00289	0.20139	0.84044	-0.04018	0.96796	5.71041	0.00000	-1.13924	0.25494
2	0.00018	0.00006	0.03075	0.08268	803.00000	803.00000	0.00108	0.00292	0.16424	0.86958	0.02130	0.98301	4.65702	0.00000	0.60388	0.54609
3	-0.00076	-0.00070	0.02680	0.08703	803.00000	803.00000	0.00095	0.00307	-0.80331	0.42203	-0.22717	0.82035	-22.77785	0.00000	-6.44138	0.00000
4	-0.00004	-0.00074	0.02308	0.09175	803.00000	803.00000	0.00081	0.00324	-0.04873	0.96115	-0.22776	0.81989	-1.38179	0.16742	-6.45806	0.00000
5	-0.00101	-0.00175	0.02146	0.09320	803.00000	803.00000	0.00076	0.00329	-1.33714	0.18156	-0.53216	0.59476	-37.91454	0.00000	-15.08941	0.00000



Appendix 2.4 - The average abnormal returns of target's companies 1 day prior to and 1 day after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_aar	bmp_p_t_aar	bmp_t_acar	bmp_p_t_acar
-1	0.00756	0.00756	0.05786	0.05786	588.00000	588.00000	0.00238	0.00238	3.16953	0.00161	3.16953	0.00161	76.92248	0.00000	76.92248	0.00000
0	0.20249	0.21005	0.28931	0.29570	588.00000	588.00000	0.01192	0.01218	16.97181	0.00000	17.22531	0.00000	411.89491	0.00000	418.04713	0.00000
1	0.07168	0.28174	0.26342	0.35008	588.00000	588.00000	0.01085	0.01442	6.59878	0.00000	19.51487	0.00000	160.14821	0.00000	473.61336	0.00000

Appendix 2.5 - The average abnormal returns of target's companies 2 days prior to and 2 days after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_aar	bmp_p_t_aar	bmp_t_acar	bmp_p_t_acar
-2	0.00554	0.00554	0.05742	0.05742	588.00000	588.00000	0.00237	0.00237	2.33850	0.01970	2.33850	0.01970	56.75396	0.00000	56.75396	0.00000
-1	0.00756	0.01310	0.05786	0.08122	588.00000	588.00000	0.00238	0.00335	3.16953	0.00161	3.91112	0.00010	76.92248	0.00000	94.92042	0.00000
0	0.20249	0.21559	0.28931	0.29782	588.00000	588.00000	0.01192	0.01227	16.97181	0.00000	17.55354	0.00000	411.89491	0.00000	426.01310	0.00000
1	0.07168	0.28728	0.26342	0.34829	588.00000	588.00000	0.01085	0.01435	6.59878	0.00000	20.00110	0.00000	160.14821	0.00000	485.41380	0.00000
2	0.00433	0.29161	0.05515	0.34999	588.00000	588.00000	0.00227	0.01442	1.90315	0.05751	20.20360	0.00000	46.18816	0.00000	490.32838	0.00000

Appendix 2.6 - The average abnormal returns of target's companies 5 days prior to and 5 days after the announcement

Event window day	aar	acar	c_sd_ar	c_sd_car	n_ar	n_car	bmp_sd_ar	bmp_sd_car	t_aar	p_t_aar	t_acar	p_t_acar	bmp_t_aar	bmp_p_t_aar	bmp_t_acar	bmp_p_t_acar
-5	0.00173	0.00173	0.04755	0.04755	588.00000	588.00000	0.00196	0.00196	0.87992	0.37926	0.87992	0.37926	21.35514	0.00000	21.35514	0.00000
-4	0.00190	0.00363	0.03983	0.06202	588.00000	588.00000	0.00164	0.00256	1.15823	0.24724	1.41859	0.15655	28.10951	0.00000	34.42828	0.00000
-3	0.00511	0.00874	0.04260	0.07371	588.00000	588.00000	0.00176	0.00304	2.90702	0.00379	2.87361	0.00420	70.55140	0.00000	69.74074	0.00000
-2	0.00554	0.01427	0.05742	0.08098	588.00000	588.00000	0.00237	0.00334	2.33850	0.01970	4.27370	0.00002	56.75396	0.00000	103.72000	0.00000
-1	0.00756	0.02184	0.05786	0.10508	588.00000	588.00000	0.00238	0.00433	3.16953	0.00161	5.03870	0.00000	76.92248	0.00000	122.28600	0.00000
0	0.20249	0.22433	0.28931	0.30246	588.00000	588.00000	0.01192	0.01246	16.97181	0.00000	17.98464	0.00000	411.89491	0.00000	436.47576	0.00000
1	0.07168	0.29601	0.26342	0.34465	588.00000	588.00000	0.01085	0.01420	6.59878	0.00000	20.82688	0.00000	160.14821	0.00000	505.45508	0.00000
2	0.00433	0.30034	0.05515	0.34675	588.00000	588.00000	0.00227	0.01429	1.90315	0.05751	21.00332	0.00000	46.18816	0.00000	509.73708	0.00000
3	0.00019	0.30053	0.03074	0.34933	588.00000	588.00000	0.00127	0.01439	0.14935	0.88133	20.86108	0.00000	3.62471	0.00031	506.28496	0.00000
4	-0.00166	0.29887	0.02708	0.35199	588.00000	588.00000	0.00112	0.01450	-1.48639	0.13771	20.58949	0.00000	-36.07372	0.00000	499.69363	0.00000
5	-0.00121	0.29766	0.02386	0.35218	588.00000	588.00000	0.00098	0.01451	-1.22961	0.21934	20.49506	0.00000	-29.84188	0.00000	497.40189	0.00000