

Cross-border Mergers and Acquisitions and the Impact of Cultural Fit

Evidence from the Benelux

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Abstract

This paper examines the abnormal returns of both bidders and target in cross-border Mergers & Acquisitions. Using an event study approach, the abnormal returns on an event window of 11 days around the announcement are determined. Acquirers were found to suffer insignificantly negative losses, whereas targets gained large significantly positive returns. The cultural distance, derived from the Hofstede's scores, between the two countries of origin is shown to impact bidder returns negatively. This implies that acquirers' shareholders are concerned about the integration process of the combined firm after the announcement. The findings on the method of payment show some results which contradict previous studies.

Keywords: Mergers & Acquisitions, Cross-border, Culture, Performance

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1. Introduction

Over the past few decades Mergers and Acquisitions (M&A) have become increasingly more popular. During the year 2015 over 44,000 deals were announced across the globe. The total value of all these transactions combined rose to an all-time high of 4.5 trillion USD (IMAA, 2016). Reasons provided by bankers are, amongst others, the historically low interest rates around the world which make it easier for firms to raise capital and the focus on deals which strengthen market shares (Hellier, 2017). Within this growing trend of popularity of M&A, cross-border deals have played an increasingly important role. Nowadays, thirty percent of all deals completed worldwide are cross-border transactions. These transactions are defined as two merging companies which have their corporate headquarters located in two different countries (Bloomberg, 2010). What's more, 80% of all the Foreign Direct Investment (FDI) consists of Mergers and Acquisitions (Conn et al., 2005).

The topic of M&A is currently much debated in the Netherlands. Since March this year, one particular Acquisition has been dominating the financial news. PPG Industries, based in Pittsburgh, USA launched its takeover bid of the Dutch AEX-listed company AkzoNobel. AkzoNobel kept refusing the bids by PPG without any negotiations between the two companies, which lead to several lawsuits. The proposal of the acquisition even prompted politicians to discuss extra legislation to protect domestic firms against foreign entities (Sterling, 2017). According to AkzoNobel's CEO, the PPG bid was too low and would lead to too much risk for both firms. Besides, another important reason for the rejection of the takeover bid was the "significant cultural gap" between the two firms (Ross, 2017). In these so-called cross-border M&As the cultural gap between the two firms seems to be a very important factor influencing the post-merger performance (Weber, 1996). Several scientific papers have tried to find out the importance of the cultural gap, these will be reviewed in the relevant literature section. Besides researchers, many CEOs and other persons in corporate management like AkzoNobel's CEO, agree on the importance of cultural fit when two companies merge (Olie, 1990).

The majority of the vast amount of existing literature focused on the performance of M&As.

However, when reviewing the academic literature, it seems that there is no consensus on the performance of M&As to the shareholders' value. It is clear that the target shareholders generally receive large premiums and therefore large positive abnormal returns are observed for these firms. On the other hand, the literature does not seem to provide a clear answer to whether M&As create or destroy value for the stakeholders of bidding firms (Cartwright and Schoenberg, 2006; Agrawal and Jaffe, 2000). The distinction between domestic and cross-border deals is important to make, since cross-border deals come with more difficulties. As Humphery-Jenner, Sautner and Suchard (2012) point out cross-border transactions are characterized by more information asymmetry, i.e. both parties do not possess the same level of information. The previous example with PPG and AkzoNobel and existing literature show that culture is often acknowledged as an important factor in cross-border deals. It also shows that enhancing our knowledge of the several influences on the stock returns around the announcement date of M&As such as culture is crucial for both the scientific world but also for practitioners such as the top management of firms. Besides culture, there are numerous other factors which influence M&As. These will also be discussed and researched.

Therefore, the research question in this paper is as follows:

What factors impact the shareholder value of firms during the announcement period in acquisitions of target firms headquartered in the Benelux in cross-border Mergers and Acquisitions?

This research studies a sample of target firms headquartered in the Benelux, i.e. Belgium, The Netherlands and Luxembourg, for which the announcement date for the merger was after 1/1/2000. This sample thus, will include transactions before the 2008 Financial Crisis and after the crisis and will separate the samples into three categories regarding time. The abnormal stock returns will be examined using an event study approach. The main findings of this paper are in line with previous studies. Target firms receive large premiums, whereas acquirers suffer small insignificant losses around the announcement date. Cultural distance was found to have a statistically negative effect on bidder returns. This leads to the conclusion that acquirers' shareholders may worry about the integration process after the

announcement.

This paper is structured as follows. It continues in Section two with a review of the relevant literature on the performance of (cross-border) M&As and the main drivers of this wealth creation. Section three will elaborate on the data and methodology used. Afterwards, the results from the empirical analysis will be presented. Finally, this paper ends with a conclusion in which the findings will be discussed.

2. Theoretical background and relevant literature

2.1 Mergers & Acquisitions and Performance

The topic of Mergers and Acquisitions is one of the most extensively covered subject in Finance. Researchers have mostly been focusing on the short-term performance of both bidding and target firms in terms of abnormal stock returns around the announcement date. These abnormal returns can be defined as the difference between the actual returns and the estimated or 'normal' returns. Previous research has also focused on the factors that drive the excess positive or negative announcement returns for bidders and targets.

As discussed before, there is a general consensus in previous literature that target firms involved in M&As experience large, significantly positive returns around the announcement date. For instance, Datta, Pinches and Narayanan (1992) find that their sample of target firms experience significant wealth creation of 22% in the month of the announcement. High abnormal returns for target firms apply to both domestic M&As and cross-border transactions (Kang, 1993).

Research on the wealth creation for the bidding or acquiring firms however, turns out to provide mixed conclusions. On the one hand, some researchers found positive returns for acquirers around the announcement date. Asquith, Bruner and Mullins (1982) report on average 0.9% positive excess returns for bidding firms during the announcement month which is significant at the 0.01 level. Franks and Harris (1989) and Eckbo and Thorburn (2000) also report significant positive gains to bidding firms' shareholders on the announcement day. On the other hand, many others found negative or insignificant abnormal returns. Firth (1980) found acquiring firms to experience large negative returns which completely offset the target gains in his sample. Dodd (1980) showed that in his sample containing 60 mergers, bidding firms earned significant negative abnormal returns of 1.09%. Negative bidder returns can be explained by the large premiums paid by acquirers. Investors may be concerned that bidders actually overpay for the target's assets and will not be able to earn it back.

Besides studying the CARs of bidders and targets separately, the combined CARs are examined in previous studies as well. Combining the CARs allows to determine whether M&As create value for the entire group of shareholders. To compute the combined CARs, the market capitalizations of both companies have to be considered, as the abnormal returns of the larger firm in the transaction, typically acquirers, should be assigned more weight than the smaller target firm. Several papers studied the combined abnormal returns. On average, these studies find that the combined CARs are significantly positive (Bradley, Desai and Kim, 1988; Cybo-Ottone and Murgia, 2000). This indicates that shareholders anticipate benefits from synergies in the newly combined entity as the combined value of the newly created firm is larger than before the announcement. These synergies can, for instance, be caused by more cost-efficient management and economies of scale.

Factors influencing the CARs to both bidders and targets have been studied extensively. A number of factors have been found that influence the abnormal returns. Some of these factors will be reviewed here. However, an important distinction between these factors should be made. That is, many factors apply to all M&As conducted globally, domestic and cross-border transactions. However, cross-border M&As come with other complexities and factors which also influence the performance of the firm after the M&A and therefore the returns of both bidders and targets around the announcement date (Humphery-Jenner, Sautner and Suchard, 2012). Therefore, cross-border M&As will have more factors influencing the performance than domestic ones.

2.2 The cross-border effect

Previous literature has examined the differences in abnormal returns of domestic and cross-border M&As, the so-called cross-border effect. Target firms in cross-border deals are found to have higher abnormal returns than target firms in domestic transactions around the announcement date (Kang, 1993; Danbolt and Maciver, 2012). Harris and Ravenscraft (1991) found the same result by their study on over 1200 acquired US targets. They tried to provide evidence for several reasons for this cross-border effect, however they were only able to provide evidence for the effect that the exchange rate has. They argued that an appreciation of the home currency, that is the currency of the acquiring firm, would lead to an increase of the target's returns. This would give foreign acquirers an edge over domestic firms, as the

foreign firm will be able to bid more aggressively than its domestic counterparts. Besides, an increase of net wealth for foreign acquirers could also reduce the necessity of raising costly extra external capital (Froot and Stein, 1991).

Another potential reason is that foreign firms may value the target firm's assets higher than domestic firms. Foreign bidding firms may be willing to pay high premiums for targets operating in certain markets overseas in order to gain entrance to this particular market (Shaked, Michel and McClain, 1991). In this case bidders' returns could also be expected to be positive, since shareholders of the bidding firm will give extra value to the entrance to the new market gained by the acquirer through the transaction (Doukas and Travlos, 1988). They provide evidence that US acquirers gain higher returns when entering new markets through an acquisition. This effect was larger when the target firm operated in a country with a less developed economy than the US. This indicates that these US acquirers may have been able to exploit certain inefficiencies after the merger.

Aw and Chatterjee (2004) found negative CARs when studying UK bidding firms in both domestic and cross-border M&As, however the CARs for domestic M&As were less negative than the cross-border M&As conducted in their study. For US bidding firms, Moeller and Schlingemann (2005) found that these acquirers' returns around the announcement date were significantly lower (one percent) for cross-border deals than for domestic ones. These findings would imply that shareholders of the bidding firm do not expect the firm to increase the revenue after the merger to earn back the premiums paid for the targets. Whenever bidding firms overestimate the extra value extracted from the target's assets, acquirers can expect lower abnormal returns. The level of information for acquirers will be important here, as a higher degree of imperfect information will increase the possibility of overpaying. The degree of imperfect information is likely to increase when going overseas.

Contradicting results were also found with respect to the cross-border effect. Kang (1993) reported statistically significant abnormal returns when Japanese firms acquired US targets of +0.50% around the announcement date, whereas US firms conducting a domestic transaction experienced a -0.10% CAR which turned out to be insignificant. Markides and Ittner (1994) reported positive abnormal returns for their sample of US bidding firms

acquiring non US targets.

2.3 The impact of cultural fit

There is a vast amount of literature linking performance of firms after a merger and the compatibility of culture of the two firms involved in a transaction. Both researchers and practitioners seem to agree on the fact that the culture determines the performance of merged firms (Chakrabati, Jayaraman and Mukherjee, 2005). It is hypothesized that the bigger the cultural differences between two merging firms, the worse the performance will be (Chatterjee et al., 1992). However, culture is somewhat hard to define. In general, culture is seen as the set of assumptions about several dimensions that a community shares (Schein, 1985). Ahern, Daminelli and Fracassi (2012) define culture by three major aspects, individualism, trust and hierarchy. They find that the amount of mergers diminishes if the cultural distance increases. Not only the volume of mergers decreases, also the combined stock returns in their sample are worse when culture differs more between the two countries. Perhaps the most common and well-known definition of culture is provided by Hofstede (1980) and Kogut and Singh (1988). Kogut and Singh (1998) defined the cultural distance between two countries by taking the composite index of the deviation based on four dimensions which were established by Hofstede (1980) i.e. power distance, uncertainty avoidance masculinity and individualism. This method will be discussed in more detail in the data and methodology section.

Chatterjee et al. (1992) combined empirical research on the performance of merging firms during the 16 and 7 days around the announcement date with an extensive survey on the perceptions of top management on culture. They found a negative relation between acquirers' shareholder gains and cultural differences which were significant at the 0.01 and 0.10 level respectively.

Conn et al.'s (2005) results show that cross-border deals' announcement and long term returns of the newly combined firm are significantly lower than returns for domestic M&As. Their results indicate that the long term returns are negatively influenced by the difference in the national culture of the bidding firm and the target firm. The lower announcement returns indicate that shareholders potentially expect difficulties during the integration

processes for the newly combined firms. Lower long term returns actually support this, as the combined firm is likely to have lowered its expectations on future revenues.

Surprisingly, Chakrabati, Jayaraman and Mukherjee (2005) report contradicting results. Acquirer's returns in deals between firms characterized by higher cultural distance were found to perform better in the long run. They provide two general reasons for their findings. First, they argue that it is possible that merged firms with big cultural differences perform better because they complement each other and therefore being able to help each other out in situations. Secondly, there may be a selection bias in their sample as acquirers of culturally distant firms only bid on targets when they are absolutely confident that they will end up with synergies, that cover the risk involved.

Morosini, Shane and Singh (1998) argue similarly and adopt the alternative hypothesis that more cultural distance increases performance, as the merger allows the acquirer to benefit from the different set of routines of the target firm and thus, improve performance. After studying 52 cross border transactions in which they employed the combined methodology by Hofstede (1980) and Kogut and Singh (1988) they find evidence that supports their hypothesis.

Besides the cultural differences, differences in institutional settings between countries exist. These include, for instance, differences in education systems and, more importantly, differences in governance between countries. Like the so called cultural fit, it is commonly assumed that the larger the differences in institutional settings between two countries, the worse the returns will be for the bidder since it will have to adjust to those settings (Vermeulen and Barkema, 2002).

2.4 Drivers of wealth creation in cross-border and domestic deals

Research has shown that the method of payment influences abnormal stock returns during the announcement period. Transactions can be financed by the bidding firm using cash, stock or a mix of both. The so-called method of payment hypothesis states that companies that use stock to finance the transaction deem themselves to be overvalued. Firms pay cash to the target firm when they are correctly valued. Therefore, transactions using cash will, on average, lead to higher abnormal returns for both the acquirer and target, whereas equity

deals lead to lower returns (Fuller, Netter and Stegemoller, 2002). Both Travlos (1987) and Servaes (1991) show that acquirers using stock to pay for the transaction experienced lower returns than bidding firms using cash to finance the deal which confirms the method of payment hypothesis. Another theory related to the method of payment says that stock offers take longer to complete the transaction since the acquirer has to seek approval from the Securities and Exchange Commission (SEC) (Datta, Pinches and Narayanan, 1992). This may lead to more competition in acquiring the target, which comes at the expense of the bidding firm's returns.

Previous literature shows that bidding firms tend to have lower abnormal returns whenever there are multiple takeover bids on the table for the same target firm. Both Datta, Pinches and Narayanan (1992) and Bradley, Desai and Kim (1988) find that competition amongst acquirers of the same target leads to higher abnormal returns for targets and lower returns for bidders. This suggests that competition drives up premiums paid by bidders which in turn may lead to overpayment and therefore negative abnormal returns for acquirers. This effect was also found in cross-border deals as Kang (1993) shows for his sample of Japanese acquirers of US targets.

Research has shown that the market-to-book ratio of target firms plays a role in the abnormal returns of firms during the announcement period. The market-to-book ratio represents the fraction between the market value and the book value of the firm. Goergen and Renneboog (2004) show that high market-to-book ratios for target firms lead to higher returns for target firms, whereas acquirers face negative abnormal returns. Target firms with high market-to-book ratios are typically firms with high growth opportunities. Therefore, acquirers are willing to pay high premiums for such firms, leading to high abnormal returns for target. At the same time, investors are worried for overpaying acquirers, leading to negative abnormal returns for bidders around the announcement date.

2.5 Hypotheses development

To answer the research question on which this paper is based a number of hypotheses will be developed. The research question is as follows:

What factors impact the shareholder value of firms during the announcement period in acquisitions of target firms headquartered in the Benelux in cross-border Mergers and Acquisitions?

First, the abnormal announcement returns for targets and bidders will be measured. Based on the previous literature the following hypotheses are developed:

H1a: Target firms experience positive abnormal returns during the announcement period.

H1b: Acquirers experience no significant abnormal returns during the announcement period.

Besides looking at the abnormal returns of bidders and targets individually, this research will also focus on the abnormal returns for the combination of firms, formed by the merger. By combining the CARs, a conclusion can be drawn on whether the M&A creates value for shareholders as a whole.

H2: The combined cumulative abnormal returns are significantly positive during the announcement period.

As discussed in 2.3.2, previous literature shows that the national culture plays an important role in the abnormal returns around the announcement period. However, researchers have argued from two conflicting standpoints. On the one hand, previous research has argued and provided evidence that an increase in cultural distance leads to more information asymmetry and more integration problems and therefore negative abnormal returns.

On the other hand, several papers put forward an alternative hypothesis, which stated that the acquirer can actually benefit from more cultural distance characterized by a different set of assumptions and bigger differences in the dimensions provided by Hofstede (1980).

However, taking into account that the majority of the research and investors seem to agree with the first proposition, the hypothesis on culture is as follows:

H3: More cultural distance is associated with lower abnormal returns for acquirers around the announcement period.

Besides the impact of culture, the method of payment will be included as an explanatory variable of the CARs.

H4: M&As financed by equity are associated with lower abnormal returns for acquirers and targets whereas cash bids are associated with higher abnormal returns for acquirers and targets.

3. Data and methodology

3.1 Data and sample selection

To collect the sample for this study Thomson One will be used. Criteria for the sample selection are as follows:

- M&A announcement date after 1/1/2000
- Target location: The Netherlands, Belgium and Luxembourg
- Cross-border Deal Flag: Yes
- Acquirer location excluded: The Netherlands, Belgium and Luxembourg
- Acquirer's status: Public
- Target's status: Public
- Deal status: Completed
- Acquirer owns over 50% of target after the acquisition

The first three criteria were set to fulfil the scope of this paper. Both the acquirer's and the target's status were set as public in order to be able to retrieve stock prices. When there is a minimum of 50% change shift of ownership, there is a shift of power from the target to the acquirer. Setting these criteria leaves a sample of 89 Mergers and Acquisitions. Acquirers from 17 different countries were included in the sample. Furthermore data was retrieved through ThomsonOne on the method of payment and the market-to-book ratio. A total of 46 M&As were paid for by a full cash offer. Twenty transactions were fully paid for using equity and the same number used a mixed payment. For 15 transactions no specification was provided on the method of payment.

The firm's Datastream codes retrieved from ThomsonOne were then used to generate the stock prices from Datastream. After eliminating the duplicates, the sample was limited to 84 deals. Besides, the acquisition of World Online was excluded from the sample as this firm witnessed enormous losses just after the IPO. The firm's market-to-book ratio was 29 at the time of the merger announcement which would have led to a potential bias.

3.2 Methodology

3.2.1 Event study

In their famous research, Fama (1970) developed the framework of the efficient market. He argues that in an efficient market, stock prices will reflect all relevant available information to the market about future values and that returns are completely independent i.e. returns in the past do not have any predictive value. This means that after the announcement of a merger, which implicates new information, the market will react by altering the stock prices. The event study is commonly used to look at the abnormal stock returns around the M&A announcement date. This study determines the stock market reaction to events such as the announcement of an M&A. Therefore, the event study will be adopted in this research. To employ the event study a number of steps are taken.

3.2.2 Event date

The first step is to identify the event date. This is the date of the announcement of the M&A and therefore defined as $t=0$. On this date, the new information is released to the market, thus the market should interpret this into the securities' prices. The event date is automatically defined by the ThomsonOne database when selecting the sample.

3.2.3 Event window

In reality, prices will likely not adjust immediately and accordingly to the release of new information. The release of news can be delayed or investors could initially under or overestimate the implication of the new information. Therefore, the event window will be determined to solve this potential issue. The event window will consist of multiple consecutive days around the event date, $t=0$. The event window should capture the entire effect of the announcement of the M&A, however adding more days to the event window will result in less power to the results as the window may now include effects that are completely unrelated to the event, i.e. the announcement of the merger. In this paper the event window will be set to $[-5,+5]$. This means that the event window includes the five days prior to the announcement and the five days after, 11 days in total.

3.2.4 The estimation period

The estimation period serves as the control period. This period is used to determine the normal stock returns, in absence of the event. Most commonly the estimation period is set

before the event window. The estimation period for this research will be set to [-120,-20]. The 20 days prior to the merger will not be included in the estimation period. This is done in order to exclude the effect of potential rumours or (parts of) information leaking out prior to the event date.

3.2.5 Determining the normal returns

Now that the event window and the estimation period are set, the normal returns i.e. the hypothesized returns which would be realized without the occurrence of the event. To calculate the normal returns, various models can be employed. The most commonly used model to do this, is the market model. This model assumes a constant and a linear relation between one asset's returns and the return on a market index. Therefore:

$$R_{i,t} = \alpha_i + \beta_i R_{M,t} + \epsilon_{i,t}$$

with:

$$\epsilon_{i,t} = 0$$

and

$$\text{VAR} [\epsilon_{i,t}] = \sigma^2_{\epsilon_i}$$

where α_i = the intercept of firm i

The market model will be adopted in this paper in order to determine the normal returns.

3.2.6 Determining the cumulative abnormal returns (CAR)

To determine the abnormal returns following the announcement of M&As, the normal returns have to be calculated first. As discussed before, the normal returns will be determined using the market model. The abnormal returns can be calculated by taking the difference between the actual returns and the normal returns. This implies that the abnormal returns reflect the difference of the returns in occurrence of the event, the actual returns, and the returns in absence of the event, the normal returns. Therefore the formula for the abnormal returns can be described by:

$$AR_{it} = R_{it} - E(R_{it} | X_t)$$

where

AR_{it} = Abnormal return for firm i at time t

R_{it} = Realized return for firm i at time t

$E(R_{it} | X_t)$ = Normal return (which can be replaced by the formula for the market model)

The cumulative abnormal returns (CAR) is determined by adding the abnormal returns over the event window. Therefore:

$$CAR_{i(T1,T2)} = \sum_{T1}^{T2} AR_{i,t}$$

The tests of abnormal returns are based on the averages of measures therefore, the cumulative average abnormal returns (CAAR) has to be determined.

$$CAAR_{(T1,T2)} = \frac{1}{N} \sum_{i=1}^N CAR_{i(T1,T2)}$$

Besides the CARs for bidding firms and target firms individually, the CAR of the combined firm can be determined. To compute this however, the relative market values of both the bidder and target have to be taken into account. To do this, the following formula is used:

$$CAR_{combined,i} = \frac{CAR_{bidder,i} * MV_{bidder,i} + CAR_{target,i} * MV_{target,i}}{MV_{bidder,i} + MV_{target,i}}$$

where

CAR combined, I = Cumulative abnormal return for transaction i

MV bidder, I = Market value of acquirer i

MV target, I = Market value of target i

3.2.7 Significance test

To test the significance of the CARs, CAARs and the independent variables in the regression model, statistical tests will be employed. In these statistical tests, two hypotheses, the null hypothesis and the alternative hypothesis are developed. The null hypothesis states that there will be no abnormal returns, i.e.

$$H_0: \mu = 0$$

Whereas the alternative hypothesis can be either:

$$H_\alpha: \mu \neq 0$$

or

$$H_\alpha: \mu > 0$$

$$H_\alpha: \mu < 0$$

The student t-test can be used to determine the significance of the abnormal returns, since the sample size is large enough. This leads to a normal distribution of the abnormal returns.

The formula for the t statistic is as follows:

$$t_{AARt} = \frac{AAR_t}{S_{AARt} / \sqrt{N}}$$

where

t_{AARt} = T stat for average abnormal returns at time t

S_{AARt} = Standard deviation across the sample at time t

\sqrt{N} = Square root of sample size

and

$$S_{AARt}^2 = \frac{1}{N-1} \sum_{i=1}^N (AR_{i,t} - AAR_t)^2$$

For the CAAR:

$$t_{CAAR} = \frac{CAAR}{S_{CAAR} / \sqrt{N}}$$

and

$$S_{CAAR}^2 = \frac{1}{N-1} \sum_{i=1}^N (CAR_i - CAAR)^2$$

3.3 Variables

3.3.1 Dependent variable

To verify and test the impact of the factors on the abnormal returns, cross-sectional regressions will be estimated. The dependent variable in this research will be the CAR. These are calculated through the event study.

3.3.2 Independent variables

The independent variables function as the explanatory variables. Thus, these variables test the impact of factors on the CAR. The main explanatory variable will be based on the scores of Hofstede's four dimensions (Hofstede, 1980). The four dimensions created by Hofstede are Power Distance, Uncertainty avoidance, Masculinity and Individualism.

The independent variable represents the composite index of the differences of the Hofstede's scores between the countries where the two firms that merge are located. Kogut and Singh (1988) were the first to apply the Hofstede's scores this way and defined the concept as Cultural Distance. The formula for the Cultural Distance is as follows:

$$CD_j = \sum_{i=1}^4 [(I_{ij} - I_{ic})^2 : V_i] : 4$$

where

CD_j = the cultural distance of the jth country from the country of interest (Netherlands, Belgium or Luxembourg)

I_{ij} = index for the ith cultural dimension and jth country

I_{ic} = index for the ith cultural dimension and c the country of interest

V_i = Variance of the cultural index

Besides the cultural distance, the method of payment will also be included in the regression as explanatory variable. To test the method of payment three separate dummies will be created, cash stock or mixed. Dum_cash will take the value of 1 when the entire takeover was paid for using cash. Dum_stock will take the value of 1 when the entire payment was fulfilled by stock and Dum_mixed is set to 1 when the bid contained a mixed cash and stock offer.

3.3.3 Control variables

In order to avoid the omitted variable bias, control variables can be included into the regression. Previous studies have shown that the relative size of the acquirer to the target impact the stock returns around the merger announcement. Therefore, the relative size, measured as the market value of the acquirer divided by the market value of the target, is included as a control variable in the regression (Moeller, Slingemann and Stulz, 2004).

3.4 Cross-sectional regression

The regressions are developed to determine the impact of the individual factors on the CARs. The following formula will be used in order to determine the impact and the significance of the factors:

$$CAR_i = \beta_0 + \beta_1 * X_{i1} + \beta_{2c} * Dum_{cash} + \beta_{2s} * Dum_{stock} + \beta_{2m} * Dum_{mixed} + \beta_3 * X_{i2}$$

where

β_0 = Intercept

X_{i1} = Factor of interest (Cultural distance)

X_{i2} = Control variable (Relative size)

The dummies in the formula take the value of one if the deal was for using the particular method.

4. Results

This chapter will discuss the empirical findings of this study. First, the results on the CARs of both acquirers and targets will be discussed. Secondly, the regression results on the factors are presented. By presenting the results, the hypotheses will be answered.

4.1 Abnormal returns around M&A announcements

In the end, the CARs were observed for 84 transactions. The descriptive statistics on both bidders and targets can be found in appendix 1 and 2.

The CAARs for both the acquiring firms and the target studied in the sample are given in Table 1. Targets experienced large positive returns during the event window [-5,5]. These abnormal returns turned out to be significant at the 0.01 level. It seems obvious that acquirers pay large premiums to target firms. This finding is in line with the extensive previous empirical research which find the same results. When removing three extreme outliers (CAR deviates over 50% from the mean) the CAAR reduces to 19.69%% but becomes even more significant than before. When looking at the AARs for target firms, as shown in appendix 3, the window [-1,+1] show significant positive returns, the first two days at the 0.01 and day +1 at 0.05 level. This finding leads to two conclusions. First of all, it implies that very little to no information leaks to the market before the M&A announcement. Secondly, investors adjust quickly to the new information.

On the other hand, bidders show insignificant CAARs of -0.79%. Only the AAR for acquirers on the event date itself is significant at the 0.05 level. These results are in accordance with the literature discussed in Chapter 2 and with the hypotheses developed. Bidders do react somewhat negatively, but only on the day of the announcement itself. This could indicate that the acquirers' shareholders quickly and accurately react to the announcement, as no other days display abnormal returns.

When dividing the sample set into three subsets, pre-, during- and post-crisis, bidder returns

remain insignificant, whereas target CAARs are significant for all time periods. However, both bidders and targets generate higher returns in the during-crisis period than the pre- and post-crisis period. Potentially, targets can be acquired cheaply during the crisis, since firms may be in financial trouble, explaining higher returns for acquirers' shareholders. However, in that case, targets' returns were expected to be lower as bidders do not pay high premiums. Perhaps the announcement was viewed by the market as a positive sign about the acquirer's financial abilities to still be able to make such acquisitions. The positive expectations regarding the acquirer can in turn, explain positive returns for the target as, investors may expect higher premiums.

Table 1 Cumulative Average abnormal returns (CAAR) of acquirers and targets

This table presents the abnormal returns in percentages of acquirers and targets on the event window [-5,+5]. The time period has been split into three sub-periods. T-values are given in parentheses. Statistical significance is indicated by *,** and *** at the 0.10, 0.05, 0.01 level respectively

	Acquirer abnormal returns	Target abnormal returns
CAAR 1/1/2000 – 1/7/2017	-0.785 (0.771)	19.689*** (0.000)
CAAR 1/1/2000 – 1/7/2007	-1.127 (0.749)	16.906*** (0.000)
CAAR 1/7/2007 – 1/7/2009	-0.096 (0.960)	23.336*** (0.003)
CAAR 1/7/2009 – 1/7/2017	-0.432 (0.708)	22.159*** (0.000)

To see whether M&As create value for shareholders, the returns for the combined firm as a whole are determined. The results on the combined CAR show significantly positive returns. On average, the combination of the new entity experiences cumulative abnormal returns of 1.82%, which is significant at the 0.05 level. This result implies that M&As actually lead to an increase of value to the society. As discussed in Chapter 2, the increase in value can be explained by synergy. Transactions can lead to economies of scale, an increase of market power for the combined firm and more cost-efficient management. These benefits created

through the M&A will be represented in the increase of the total shareholder value at the announcement.

The results on the CAARs are line with evidence found by previous research and in accordance with the first two Hypotheses.

4.2 Results on cross-sectional regression

Table 2 Cross-sectional regression on bidder returns

This table represents the impact of the variables on the bidder cumulative abnormal returns. Cultural distance and the DCash, DStock and DMixed are explanatory variables. Relativesize and the dummies for time period are used as control variables. The given p-values are used to determine the significance of each variable. Statistical significance is indicated by *, **, ***, 0.10, 0.05, 0.01 level respectively.

Variable	Coefficient	P-value
Constant	0.0201	0.451
Cultural Distance	-0.0151*	0.062
DCash	0.0418	0.249
DStock	-0.0818***	0.006
DMixed	-0.0126	0.670
Relativesize	0.0001	0.705
DPre	(omitted)	
DDuring	0.0229	0.484
DPost	0.0564*	0.074
<hr/>		
R-squared	0.1483	
F statistic	3.22***	0.0049

Table 2 presents the results on the cross-sectional regression on bidder CARs. The cultural distance is shown to be significant with a coefficient of -0.0152 (t-value = -1.89). This shows that more cultural distance lowers the abnormal returns for bidders around the announcement period. Shareholders of the acquiring firm are assumed to be concerned about the combination of two firms from culturally distant countries. This finding is in line with Hypothesis three. It does contradict the alternative hypothesis on cultural distance

adopted Chakrabati, Jayaraman and Mukherjee (2005) and Morosini, Shane and Singh (1998). The results indicate that, on average, shareholders do not expect firms to benefit from adopting and being able to combine two different sets of assumptions and routines. According to the alternative hypothesis, combining two sets of routines would allow the newly created firm to benefit and therefore, cultural distance would lead to higher abnormal returns. Table 2 also shows that the stock payments lead to significantly lower abnormal returns as hypothesized. Cash transactions included in the sample do not lead to significantly higher abnormal returns, which contradicts the previous evidence on the method of payment theory. Mixed offers are also shown to be insignificant here.

Table 3 Cross-sectional regression on target returns

This table represents the impact of the variables on the target cumulative abnormal returns. Cultural distance and the DCash, DStock and DMixed are explanatory variables. Relativesize and the dummies for time period are used as control variables. The given p-values are used to determine the significance of each variable. Statistical significance is indicated by *, **, ***, 0.10, 0.05, 0.01 level respectively.

Variable	Coefficient	P-value
Constant	-0.0222	0.833
Cultural distance	-0.0094	0.714
DCash	0.2051**	0.022
DStock	-0.0280	0.804
DMixed	0.1365	0.230
RelativeSize	-0.0010	0.144
DPre	0.1299*	0.093
DDuring	(omitted)	
DPost	0.1181	0.146
<hr/>		
R-squared	0.1464	
F-statistic	2.57**	0.0199

The results of the regression on the target CARs are displayed in Table 3. The only variable shown to impact the target CARs is the DCash, which shows that cash payments lead to higher abnormal returns. Stock payments do not lead to significantly lower abnormal

returns, which contradicts previous findings. However, when only regressing the method of payment dummies, the F-statistic is significant at the 0.01 level. This means that the dummy variables are jointly significant. Cultural distance does not have any statistically significant effect on the target abnormal returns. This implies that acquirers do not pay lower premiums to firms headquartered in culturally distant countries. Acquirers do not seem to be too concerned about the integration process, otherwise premiums paid to targets may have been lower for distant target firms. Through the ongoing process of globalization, corporate worlds have been brought closer together. This may have diminished the role cultural distance for firms.

To determine whether cultural distance would impact the combined abnormal returns, a regression between the combined CARs and the Hofstede's scores was run. The coefficient for the culture distance is negative, -0.0075, however insignificant (t-score = -0.92). Therefore, the cultural distance was not found to significantly impact the combined abnormal returns.

4.3 Robustness

This sample consists of transactions for which the announcement was both in the pre-crisis and the during/post-crisis periods. As shown in Section 4.1, both CARs of bidders and targets were shown to be lower during the pre-crisis period. Therefore, a dummy was included in the cross-sectional regressions to control for the time periods. Previous work has shown that the relative size of acquirers and targets has influence on the abnormal returns. As a result, relative size has also been included as a control variable in the regressions.

5. Conclusion

This paper examines the abnormal returns of both acquirers and targets around the M&A announcement and tries to identify the factors driving wealth creation. It extends the existing knowledge on the relation of M&A announcement returns and cultural distance by studying a sample that contains M&As of targets within the Benelux. Acquirers in the transactions are headquartered outside the Benelux and the announcement date is after 1/1/2000. The findings are predominantly in line with the consensus of previous literature. Acquirers seem to experience slightly negative, insignificant results. On the other hand, targets show large significantly positive returns. When combining targets' and bidders' CARs, significantly positive returns are observed. This leads to the conclusion that M&As create value for their shareholders. Furthermore, when looking at the AARs, only days [-1,+1] were significant for targets and the announcement day for bidders. This finding would indicate that shareholders quickly respond to the new information leaked to the market.

The cross-sectional regression on acquirers' returns shows that more cultural distance leads to lower abnormal returns. This result is significant at the 0.10 level. Furthermore, stock payments were found to generate lower returns for bidders, which supports the theory on the method of payment. Cash payments turned out to provide contradicting results, as cash payments did not lead to higher returns for bidders. Mixed offers did not have any statistically significant effect on the CARs. Cultural distance does not have significant influence on the target and combined CARs.

The main implication of the findings is that cultural differences should be taken into account by managers, both during the integration process and, perhaps more importantly, prior to the announcement. This paper and several others have shown that cultural distance affects the bidders' announcement returns negatively, which indicates that shareholders are concerned about the integration process. Managers can react to this by looking for M&A targets which are closely related to their own firm. This would not only ease the integration process, it will also benefit the announcement returns.

One potential limitation of this study is the use of the Hofstede scores. Some have criticised the use of this measure. For instance, the cultural distance is calculated at one point in time, since the scores were measured at one particular moment (although they have been refined multiple times since). However, culture is assumed to change over time, therefore the scores may not always represent the countries' culture accurately. Besides, scores were allocated to countries, not to companies. Some firms headquartered in a certain country may have a corporate culture which deviates from the country's culture.

Further research can possibly focus on other measures of performance. First of all, accounting based measures can be adopted as the performance measure. This could shed light on the changes in, for instance, revenue and costs of the combined entity after the M&A. Secondly, the long term abnormal returns can be a suggestion for further research. This allows to determine the effect of the entire integration process of the two firms. The actual endured difficulties during the integration process can either worse or better than shareholders thought at the announcement. By studying the long-term returns, conclusions may be drawn on whether shareholders were able to correctly estimate the difficulties at the date of the announcement.

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Appendix

Appendix 1 Descriptive statistics acquirers

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Acquirers' CAR	84	-0.785%	0.096	-19.010%	42.179%
Cashoffer	44	1.803%	0.098	-12.254%	42.179%
Stockoffer	16	-6.246%	0.089	-19.010%	18.829%
Mixedoffer	15	-2.523%	0.079	-18.148%	8.245%
Cultural distance	84	1.421	0.991	0.098	4.613
Relative size	84	22.476	39.207	0.82	211.39

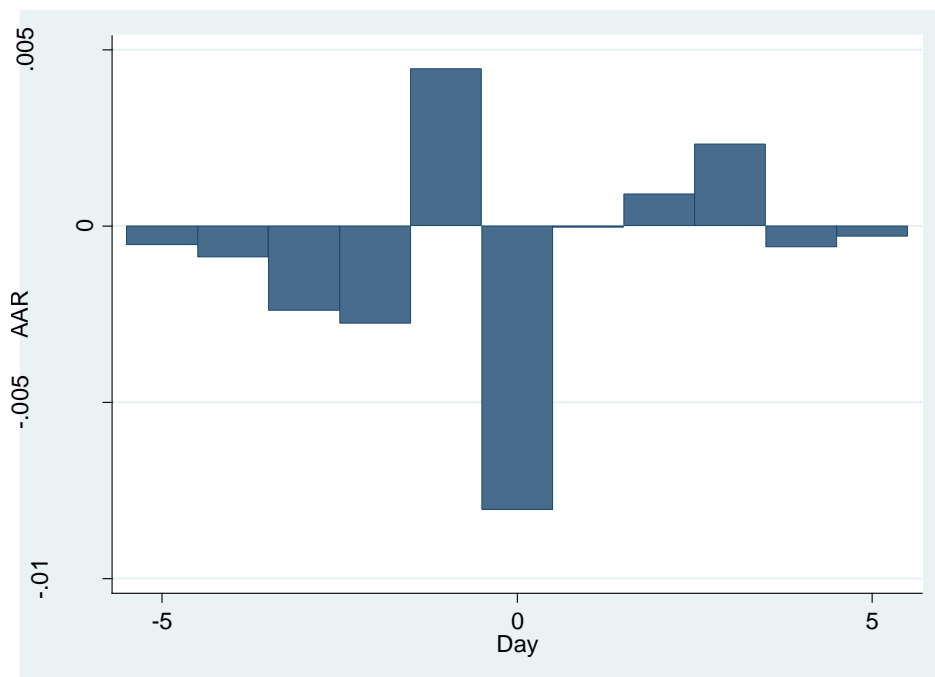
Appendix 2 Descriptive statistics targets

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Targets' CAR	81	19.689%	0.217	-26.723%	68.544%
Cashoffer	41	25.238%	0.221	-26.723%	68.544%
Stockoffer	16	6.511%	0.118	-15.327%	38.120%
Mixedoffer	15	23.320%	0.190	-14.460%	62.570%
Cultural distance	81	1.421	0.991	0.098	4.613
Relative size	81	22.476	39.207	0.82	211.39

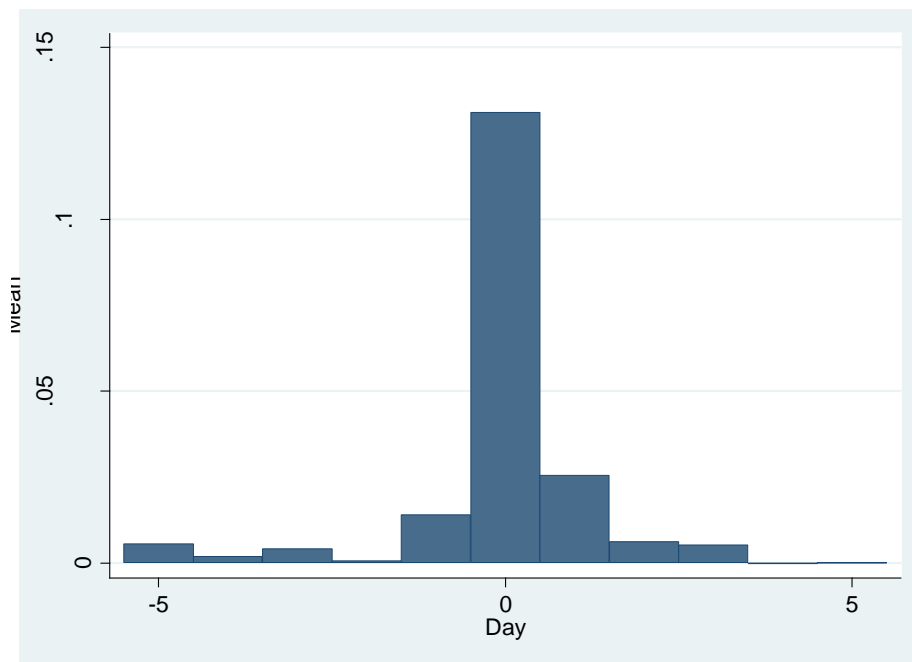
Appendix 3 Average abnormal returns (AAR) of acquirers and targets [-5,+5]

Day	Acquirer abnormal returns	Target abnormal returns
-5	-0.052	0.548
-4	-0.087	0.183
-3	-0.241	0.405
-2	-0.277	0.061
-1	0.446	1.404***
0	-0.804**	13.104***
+1	-0.005	2.547**
+2	0.091	0.616
+3	0.233	0.528
+4	-0.059	-0.020
+5	-0.030	-0.012

Appendix 4 Chart AARs bidders



Appendix 5 Chart AARs targets



Appendix 6 Correlation matrix

	1	2	3	4	5	6	7	8	9
CAR	1								
Cashoffer	0.260	1							
Stockoffer	-0.306	-0.502	1						
Mixedoffer	0.080	-0.482	-0.237	1					
Cult. Dist.	-0.058	-0.019	0.0423	-0.071	1				
Rel. size	-0.037	0.345	-0.170	-0.167	0.068	1			
Pre	-0.037	-0.413	0.433	0.416	-0.076	-0.208	1		
During	0.033	0.431	-0.216	-0.208	-0.122	0.293	-0.501	1	
Post	0.013	0.104	-0.303	-0.291	0.185	-0.011	-0.700	-0.267	1