



Bidder Value Implications of Cross-Border vs Domestic Acquisitions: A Study of Dutch Firms

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Abstract: This study investigates the value implications of cross-border and domestic acquisitions that Dutch bidding firms undertake. This study focuses on Dutch firms since the Netherlands is one of the world's largest sources of cross-border investments, and cross-border acquisitions are a prime example. Past literature which focuses on different regions/countries discovered conflicting findings regarding the value implications of cross-border and domestic acquisitions. Some recorded results that pointed towards value creation for cross-border acquisitions, while some found the opposite. This study utilizes the event study methodology to determine whether cross-border and domestic acquisitions create significant value right after the announcement of the acquisition. This is done by testing the significance of the Cumulative Average Abnormal Returns (CAARs) of 62 cases of acquisitions, comprising 31 cross-border and domestic acquisitions, all involving a Dutch bidding firm. The significance tests yielded statistically insignificant results for all the groups of samples. However, the CAARs themselves were positive for the cross-border acquisitions and positive but lower for domestic acquisitions. The unexpected results concluded that there is weak support towards the value-creating nature of cross-border acquisitions and that engaging in a domestic acquisition instead also does not guarantee value creation. At the same time, further inspection discovered that the firms' strategy might also play a role in the Dutch acquisition's value creation. Managers could attempt to mitigate such risks by taking measures which encourage transparency regarding their goals and intentions about the acquisition, such that potential investors have a greater chance of placing their trust in the firm.

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INTRODUCTION

In this globalized era, mergers and acquisitions are becoming exceedingly important. In 2018, the total global value of Merger & Acquisitions (M&A) transactions in the financial industry alone reached up to 862.9 billion U.S. dollars (Szmigiera, 2019). A large amount of money is being spent on a daily basis by companies either merging into one firm, or buying majority shares of other companies. However, despite these large expenses, not all M&As succeed. It is estimated that around 60%-80% of mergers and acquisitions result in value destruction (Puranam & Singh, 1999). Another interesting trend, is also an increasing number of those M&As which are cross-border, increasing by 20% throughout 2016 (Davit, 2019; Grice, 1970).

Within the field of M&As, the Netherlands is a major player as they rank 3rd in the amount of FDI outflows in 2016. A \$172 billion outflow in FDI has been a result of the so called 'megadeals' which took place in 2016, establishing them as one of the world's largest investment sources. However, despite the high numbers, the number of Dutch megadeals

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declined in recent years to just \$23 billion ([United Nations Conference on Trade and Development, 2018](#)). In order to find out the possible factors which contribute to this decline, this research will attempt to investigate whether value implications of cross-border and domestic M&As play a significant role in the phenomenon. Could it be that the decline in international investments is caused by the presence of value destructive cross-border acquisitions and a shift towards value creating domestic acquisitions?

The answer, however, is far from clear. Numerous past researchers have discovered mixed results on whether domestic/cross-border acquisitions create more value. Some found evidence that cross-border deals tend to be value destructive as opposed to domestic acquisitions which perform better in the long-run, while others found that cross-border acquisitions had value creating tendencies. Either way, this research project shall attempt to contribute to the conflicting findings using 62 cases of both domestic and cross-border acquisitions. Through analyzing the CAARs of different groups of acquisitions and testing its significance, hopefully some insight would be gained regarding the value implicating nature of cross-border and domestic acquisitions in the Netherlands.

Theoretical Background and Research Question

Research by [Erel, Liao, and Weisbach \(2012\)](#) investigates the motivations behind cross-border M&As. The rationale is the same for both domestic and cross-border M&As; firms engage in M&As due to the prospects of value creation from the combined value of two firms. The authors highlight several common benefits which firms pursue to justify cross-border M&As. The first one is the ability for combining firms to set prices which they were not allowed to set before they combined, as doing so as separate firms may indicate anti-competitive behavior. Production efficiency may also be a motive due to cheaper contracting costs. Lastly, bidding firms may take advantage of tax shields present in other firms which are subject to different regulations. In support of this idea, [Aybar and Ficici \(2009\)](#) research shows that these benefits, which allow firms to 'arbitrage' the difference within the environments, should theoretically create value since share prices would change to reflect the increase in the firm's options.

For cross-border M&As however, this premise is countered by the extra costs associated in overcoming dimensions such as cultural distance and geographical distance. Alongside these barriers, [Erel et al. \(2012\)](#) also mentioned corporate governance as an important factor, since value can only be created if shareholders are given the benefits of the acquiring firm's often better governance rights. Counterintuitively, the authors found that firms with better governance standards often opt to acquire those with poorer standards. Another important aspect to include is the valuation towards the acquiring firm. In a cross-border context, the authors stipulate that managers in countries with a stronger exchange rate would more likely engage in a cross-border M&A, perceiving the target firm as attractive when their exchange rate's position may change over time. Taking into account these additional cross-border factors, we do not know the extent to which these barriers and factors are reflected in the change in share price. If the case is similar with its hypothesized gains, and if the increased options are reflected in the changes of share price, then these negating factors should, in theory, account for a decrease in share prices. Also, if this is indeed the case, what does it mean to engage in a domestic M&A? Does being exempt from the risk of national borders mean that value will certainly be created?

This issue raises an interesting research question;

What impact does the choice between cross-border acquisitions and domestic acquisitions have on the bidder value of Dutch firms?

On paper, the idea of cross-border acquisitions seems like a promising prospect. However, with the prevailing failures, whether the merits available should still be pursued is up for questioning.

LITERATURE REVIEW

The subject of value implications of cross-border has shown to yield mixed results. One study of a sample of 276 US firms' international acquisitions along 1975-1988 is carried out by [Markides and Ittner \(1994\)](#). Their event study also takes into account variables such as size, acquirer profitability, the current presidential administration, prior international experience, tax regimes, and whether the acquiring firm was in the same industry. There were other factors too such as acquirer income, but the previously listed variables were the ones found to be constant significant predictors in the end. The main findings obtained were that international acquisitions done by the US firms resulted in a value creation, as opposed to their domestic counterparts, which at the time were on average value destructive. However, this study was only able to explain 40% of the variations of the abnormal returns, which may be the reason why other literature had contradicting findings.

Research by [Aybar and Ficici \(2009\)](#) provided additional empirical insight regarding this issue. Their event study examined a sample of 433 cross-border acquisitions involving 58 Emerging Market Multinationals (EMM's), with a majority from Asia. Contrary to the previously mentioned literature, their main finding was that more than half the cross-border M&As of emerging market multinationals that they analyzed pointed more towards value destruction than creation, as reflected through market reactions. Similar to the previous literature though, the variables they included to explain variations of abnormal returns included industry specific, firm specific and target country characteristics. What they discovered was that the relative size of the target, bids for privately owned targets, and a diversified corporate structure, have a positive influence upon abnormal returns, whereas announcement of acquisitions of high tech EMM's and acquisitions of related firms resulted in value destruction. The authors caution however, being a notably crucial limitation for all event studies, that their research is based on the assumption of the semi strong form of efficient market hypothesis. In other words, changes in share prices are reflected by information which are publicly available. Therefore, it is vital to consider that value creation or destruction also depends on the ability of market participants to interpret the firm's decisions. A remedy towards this according to the authors were to use longer term performance measures.

Literature by [Andre, Kooli, and L'her \(2004\)](#), filled the above-mentioned research gap. Their research, which involved 267 M&A's made by Canadian firms, examined how M&A's perform in the long run by employing event windows which span several years. One of the conclusions drawn was that cross-border deals have been shown to poorly perform as opposed to domestic deals of Canadian firms. However, despite their contributions, no explanation was made as to why these cross-border deals underperform in the long run. However, it provides support that there is indeed a possibility for cross-border acquisitions to have value destroying tendencies towards bidder value.

One research project focusing on Indian acquisitions attempted to combine the two approaches of assessing value implications. [Chakrabarti \(2007\)](#) examined both the long-run performance as well as the short-term announcement effects of both domestic and cross-border acquisitions involving a total of 412 Indian firms. Main findings of this study include that within the time period of 2000-2007, the announcement effects of Indian acquisitions went against the general trend of value destruction towards the acquirer, as observed by the author in a collection of literature from the late 1990s. That being said, although the long-run performance was also found to be positive, the author found that observing pre-acquisition performance with the same length of time yielded considerably better results. In other words, the positive announcement effects the author found were still insufficiently justified. The mixed findings led the author to question whether the inexperience of the Indian markets in interpreting acquisition announcements had an effect on the discrepancy.

A more recent study was carried out by Deloitte to give a managerial perspective regarding recent M&A trends. With the aim of identifying M&A trends in 2015, the authors identified three main themes within the information gathered from 500 executives across industries and regions. The first theme they identified was that cross-border M&As were mainly driven by the prospects of revenue growth and access to new products and channels. Aside from the motivations of undertaking cross-border deals, the survey also found that commercial and operational diligence, as well as a deep understanding towards the political and institutional are important determinants towards a cross-border deal's success. Lastly, the surveys also revealed that a well-executed integration planning has an exceptionally large impact upon a cross-border deal's success.

This research aims to contribute to the conflicting findings by investigating whether either value destruction or value creation is present in cross-border acquisitions made by Dutch firms. Past literature regarding cross-border acquisitions as reviewed previously have focused on Chinese firms, U.S. firms, Canadian firms, and Indian firms. By introducing a sample of Dutch firms, hopefully the findings would be able to reveal a commonality between the other samples of acquisitions in different regions and whether either stance on value implications could be generalized to a Dutch setting.

Variables, and Possible Relationships

Similar to other studies of a similar nature, the dependent variable would be the cumulative abnormal returns in a specified event window. While the independent variables would be the time series relative to the day of each firm's acquisition announcements, and whether the sample is cross-border or domestic.

As theory regarding extra costs of overcoming national barriers suggest, and since [Aybar and Ficici \(2009\)](#), as well as [Andre et al. \(2004\)](#) have observed value destructive effects in cross-border acquisitions in both short term and long-term time frames; We could hypothesize that;

H0: *Cross-border acquisitions have a significant negative impact on bidder value.*

H1: *Cross-border acquisitions do not have a significant negative impact on bidder value.*

DATA AND METHODOLOGY

Two types of approaches in answering this research questions are prominent in financial literature: the stock market approach, which uses stock market data to determine post acquisition success, and the accounting approach that considers the determinants of company performance (Dickerson, Gibson, & Tsakalotos, 1997). However, this research opts to analyze stock market data in the form of an event study.

In accordance to the standard event study methodology, the firm's rate of returns are examined for the presence of abnormal returns. Taking Aybar and Ficici (2009) sample of 58 multinationals as a benchmark, this event study attempts to examine the abnormal returns of 62 different acquiring Dutch firms. The list is compiled from the Bureau Van Dijk's Zephyr, a merger and acquisition database. First, several search criteria are entered into the database to create a custom search (See Appendix B). The categories which are narrowed down by the criteria includes the company name, company status, country of origin, the deal type, and time period. In the company name search field, the acquirer's box is ticked such that it would be shown in the list of results. For company status, the entered criteria is acquirer and listed, such that retrieving the data for analysis would be possible. The acquirer's country of origin; the Netherlands, in this case, is also entered in the search field. For deal types, only acquisitions are chosen and will be shown in the search results. Lastly, the time period entered is January 1st of 2015 up to January 1st of 2019 such that results would encompass acquisitions of the past 4 years. The preliminary list consisted of 691 firms which are further selected at random with several added criteria such that the final list consists of; acquisitions of 100% of the stake or acquisitions from a minority stake to a majority stake, and the acquiring firms are limited to the acquisition of one firm in this study/no acquiring firm is included twice in this study. The first additional criterion is included in order to specifically examine whether majority/full cross-border acquisitions of firms are value destructive. This was done because a higher stake in the acquisition is associated with higher integration costs (Szymanski & Thompson, 1990), which is a factor of interest. As mentioned previously, barriers such as this may be reflected in the change in stock price. As for the second criteria, taking into account only one acquisition for one acquiring firm allows us to gain better insight such that the scope of this research is widespread to a larger variety of acquiring firms. The result is a list of 62 acquisitions involving 124 acquiring and target firms, of which half the cases are cross-border and half the cases are domestic acquisitions (see Appendix A). Once the list of firms is compiled, the relevant stock price historical data is downloaded from investing.com.

Organizing the event study in a way such that the effects of cross-border acquisitions and domestic acquisitions could be compared, requires the event study to be done three times. The general idea is that, CAARs are calculated for cross-border samples, and then a normality test will be applied to the samples to determine whether the assumption of normality is fulfilled. This would then reveal whether parametric or non-parametric tests should be used to check whether the returns are significantly different from zero at the event window. The process is repeated separately for the domestic samples, and finally for both cross-border and domestic samples combined.

There are typically 3 techniques that are prominently used in event studies. Brown and Warner (1985) specified the ways in which abnormal returns can be calculated; including the mean adjusted return, the market adjusted return, and the risk adjusted return. This study attempts to calculate abnormal returns using the mean adjusted model. This method involves the assumptions of the Capital Asset Pricing Model (CAPM) such that a security has constant systematic risk, the set of optimal portfolios that offer the highest expected return for a defined level of risk or the lowest risk for a given level of expected return is stationary, and the expected return for the security is constant. Another separate assumption that this technique adopts is the semi-strong market hypothesis, which dictates that the changes in stock prices are reflected by the information which are publicly available to investors (Fama, 1960). This method is the preferred method in this study mainly because the sample of firms are listed in different stock markets, which renders methods such as the market adjusted model incompatible. Given these assumptions, the mean adjusted return can be calculated with the formula below

$$AR_{it} = R_{it} - \bar{R}_i$$

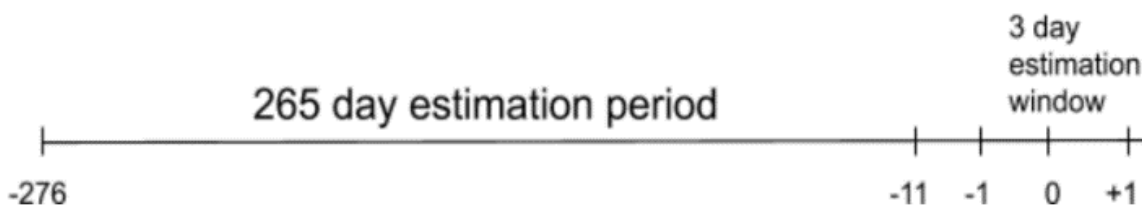
The first step involves calculating the average rate of return for a certain estimation period (\bar{R}_i). Then the mean or the 'normal' returns would be subtracted from the rate of return in the specified event window (R_{it}), leaving only abnormal returns of the event window (AR_{it}) as a result. Finally, an average of the abnormal returns would be calculated

to obtain the CAAR, using the formula below;

$$CAAR = \frac{1}{n} \sum_{i=1}^n CAR(t_1, t_2)$$

Where n is the number of observations and $CAR(t_1, t_2)$ is the cumulative abnormal return of a firm's stocks in an event window. If the CAAR value is negative and is indeed significant for the group Cross-border samples, then the null hypothesis can be confirmed. The method also applies for the collection of domestic samples, and thus a comparison can be made between the two groups.

Aybar and Ficici (2009) work becomes a reference point for the event windows and estimation periods of this study. The event window used is annotated as (-1,+1), which takes three days in total; including one working/trading day prior and after the event. While the estimation period ends 11 working/trading days preceding the event, and begins 265 days prior to the end of the estimation period as shown in the figure below.



DATA ANALYSIS AND RESULTS

After calculating the $CAR(-1,+1)$ for the sample of 62 firms, the $CAAR(-1,+1)$ was calculated for the 3 different groups which are all the samples together, the domestic samples, and the cross border samples. Appendix C.1 shows how the $CARs(-1,+1)$ are calculated for Unilever, one of the sample firms. As explained previously the rate of returns/change in prices were collected for its estimation window relative to the firm's announcement date. Then once obtained, the value is used to calculate the abnormal returns for each event day. A sum of these values constitute the $CARs(-1,+1)$. Finally, appendix C.2 shows how a group of the $CARs$ are averaged to obtain the $CAARs(-1,+1)$ of the 3 different groups.

The preliminary results were as follows; the cross-border samples yielded a $CAAR(-1,+1)$ of 1.25%, while the $CAAR$ of the domestic samples was 0.03% and all the samples together resulted in a $CAAR(-1,+1)$ of 0.64%.

Before testing if the $CAARs(-1,+1)$ were significantly different from zero, the 3 groups of samples were separately processed in SPSS and were tested for normality in order to determine if either a parametric test or non-parametric test was suitable. Results of both the Shapiro-wilk and Kolmogorov-Smirnov tests of normality revealed that the $CAR(-1,+1)$ for all the groups of samples were significant at $p < 0.001$ (See Appendix D). This meant that for both tests, there was sufficient evidence to reject the null hypothesis of normality. Therefore, it was appropriate to use a non-parametric test to check for the significance of $CAAR(-1,+1)$. However, in accordance with other standard event studies, a simple t-test would also be used to analyze the results. To avoid any sort of bias regarding the results of the test, 3 different non-parametric tests would be used to check for significance. The three non-parametric tests used will be briefly explained as follows;

The Sign Test

Proposed by Cowan (1992), this test utilizes proportions of positive abnormal returns within the event window to calculate a testable t_{sign} statistic which would be used to reject or accept the null hypothesis that the proportion should not differ from 0.5. This test accounts for the skewness in security returns, hence the data set does not have to be parametric. The t_{sign} statistic is calculated as follows:

$$t_{sign} = \sqrt{N} \left(\frac{\hat{p} - 0.5}{\sqrt{0.5(1 - 0.5)}} \right)$$

The Generalized Sign Test

Also proposed by Cowan (1992), this test posits that the ratio of the positive CARs within the event window would not differ from the ratio of positive abnormal returns found in the estimation window (\hat{p}). Where \hat{p} is calculated as follows;

$$\hat{p} = \frac{1}{N} \sum_{i=1}^N \frac{1}{L_1} \sum_{t=T_0}^{T_1} \phi_{i,t}$$

After \hat{p} is obtained, to test H 0: CAAR=0, the $Z_{g\text{sign}}$ is calculated by;

$$z_{g\text{sign}} = \frac{(w - N\hat{p})}{\sqrt{N\hat{p}(1 - \hat{p})}}$$

Wilcoxon's Signed Rank test

First introduced by Wilcoxon (1945), this test ranks observations along with it signs to take into account both the sign and the magnitude of the AR's. In order to use the Wilcoxon's test to test H 0: CAAR = 0, the calculated CAARs must be added to each of the firm's CARs before being examined. Both this test and the one sample *t*-test was the only test run in spss due to its availability.

Table 1 below summarizes the results of the 4 tests of the significance of the CAAR(-1,+1) for the three different groups of samples.

Table 1 SUMMARY OF SIGNIFICANCE TESTS

Test	Test Statistic	Value (All Samples)	<i>p</i> -Value (All Samples)	Value (Domestic)	<i>p</i> -Value (Domestic)	Value (Cross-Border)	<i>p</i> -Value (Cross-Border)
One sample <i>t</i> -test	<i>t</i>	0.81	0.42	0.03	0.98	1.17	0.25
Sign test	<i>t_{sign}</i>	-0.14	> 0.10	-0.18	> 0.1	1.26	> 0.1
Generalized sign test	<i>Z_{gsign}</i>	0.65	> 0.10	-0.36	>0.1	2.58 x 10 ⁻⁶	>0.1
Wilcoxon's signed rank test	<i>Z_{wilcoxon}</i>	-	0.54	-	0.75	-	0.35

Table 1 shows that the three groups of CAARs are insignificant for each of the 4 tests. With these results we can reject the null hypothesis that cross-border acquisitions have a significant negative impact on bidder value, on the grounds that the sign of the CAARs were actually positive for the group of cross-border samples and that statistical significance was not achieved. Despite the lack of statistical support, the positive sign of the cross-border CAARs provides interesting insight on the argument against value destructive reasonings such as the presence of geographical and cultural distance elaborated by Erel et al. (2012). In addition the CAAR(-1,+1) obtained for domestic samples is lower. In other words, it appears as if for this group of Dutch firms, the sign of the cross-border CAAR alone toward points toward the argument that the increased options a firm has after undertaking a cross-border acquisition would be reflected by the change in stock price.

DISCUSSION AND FURTHER EXAMINATION

The absence of any significant statistical support regarding the two opposing sides of theory raises the question as to why these two different stances do not apply within the context of the Dutch setting. Possible reasons may include that the CAPM model used in calculating the ARs in this study is the most basic model, which is the mean adjusted return model. The model used here does not take into account the market returns such as the market model, as well as the available risk-free rate such as the risk adjusted model. The 'noise' generated by other factors may have led to a less accurate estimation of ARs and hence CAARs which are insignificantly different from zero. In addition, similar to Aybar and Ficici (2009) paper, this study also assumes the semi strong market hypothesis, which does not take into account the information which is not publicly available, such that the value effects may take place earlier in the case of market participants getting their hands on market info earlier than official announcements.

However, aside from the previous caveats, one intriguing finding is that the CAAR(-1,+1) is higher for the cross-border sample than the domestic sample. In other words, results imply that being exempt from national borders does not guarantee more value creation for domestic acquisitions. Also contrary to expectations, is that the CAAR(-1,+1) obtained from cross-border samples was positive. There is a similarity in this case with the results obtained by [Markides and Ittner \(1994\)](#), where cross-border acquisitions originating from the U.S. creates value. It is possible that the market participants in the U.S. and the Netherlands share a similar view on which deal characteristics have implications on firm value. Therefore, it would be interesting to see what may have caused results which are the opposite of the hypothesized relationship from a lower level of analysis. To do so, it would make sense to look at the largest and smallest values of CAR(-1,+1) in the sample since they would have a relatively large influence in the value of CAAR(-1,+1). Then, common characteristics would be identified such that some support would be given to either stances of the available literature regarding the cross-border acquisition's value implications. Table 2 below lists the firms which qualify for yielding CAR(-1,+1) larger than 5% and smaller than -5%;

Table 2 *FIRMS WITH VERY LOW (<-5%) AND VERY HIGH (>5%) CAR(-1,+1)*

No	Name	Type	CAR(-1,+1)	Related/Unrelated
1	Takeaway.com	Cross-border	24.24%	Related
2	Phelix NV	Domestic	19.27%	Unrelated
3	Verenigde Nederlandse	Domestic	9.19%	Unrelated
4	Novisource	Domestic	7.93%	Related
5	DPA group NV	Domestic	7.38%	Unrelated
6	Beter Bed Holdings	Cross-border	7.26%	Related
7	IMCD NV	Cross-border	5.56%	Related
8	Stern Group NV	Domestic	-7.25%	Related
9	Lavide Holdings	Domestic	-7.46%	Unrelated
10	Mylan NV	Cross-border	-17.97%	Related
11	Avantium NV	Domestic	-22.21%	Related

Table 2 presents some insight as to why the cross-border CAARs were positive and is higher than domestic CAARs. Reaping abnormal returns above 5% are 3 firms which are engaged in cross-border deals and 4 firms which are engaged in domestic deals, with Takeaway.com, yielding the highest CAR(-1,+1) in the sample.

A common characteristic shared by the cross-border deals above the 5% threshold is that the deals made are toward firms within the same/related industry. Both [Aybar and Ficici \(2009\)](#) and [Markides and Ittner \(1994\)](#) found that the nature of the acquisition/whether the acquired and acquiring firm is in the same industry is a significant predictor of cross-border bidder value. This is consistent with the theory proposed by [Erel et al. \(2012\)](#), where the firm's options and the possibility of gains such as increased efficiency may be reflected in changes in stock prices.

But if this is the case, why did Mylan NV experience very low CAARs in the event window? The deal that took place here was between two pharmaceutical manufacturers. In other industries such as the food delivery services industry of Takeaway.com, a related deal could lead to potential efficiency, and all. However, the pharmaceutical industry is experiencing what is known as market deterioration ([Grover, 2016](#)). It could be that in this particular case, the combining of competitive entities could lead to an increasingly unsustainable market.

It would make sense then to assume, if the potential for increased efficiency would have positive value implications, that domestic firms undertaking acquisitions in related industries to obtain similar value creating benefits. However, in Table 2, Novisource was the only firm to incur abnormal returns above 5%, while the rest of the firms acquiring domestic firms of the same industry in Table 2 did not manage to obtain CARs above 5%. Quite the contrary, the 2nd and 3rd highest firms to extract the highest CAR(-1,+1) acquired firms from a different industry.

The case is different for domestic acquisitions than cross-border acquisitions in that respect. It could be that as opposed to the organic growing strategy that is pursued through acquisitions of firms in the same industry is not perceived as attractive as the conglomerate acquisitions done by the other firms that reach above 5%. Firms which

undertake conglomerate acquisitions could be motivated by other factors aside from potential efficiency gains. The effects of risk diversification could be one of those factors (Amihud & Lev, 1981). What is also apparent in the table above is that there are no firms that acquired a target from overseas. This could be an indication of investor's lack of confidence towards international conglomerate acquisitions, fearing that there might be integration difficulties as theorized by Erel et al. (2012). In support of this idea, Singh and Montgomery (1987) discovered that related acquisitions have higher gains than their unrelated counterparts. The difference in industry practices, as well as impediments such as cultural differences, could be a potential explanation as to why no cross-border and unrelated deals made it past the 5% threshold.

To sum up, a brief analysis towards the biggest winners and losers of the sample could imply a number of things in relation to the available theory of value implications. First, the largest gains which led to the positive CAAR for the group of cross-border deals originate from firms which are likely to be motivated by organic growth through efficiency gains, and all. Second, for domestic acquisitions, a different set of rules may apply since the biggest gains in domestic deals, with the exception of Novisource, are acquisitions of firms in different industries. In other words, it is possible that the reduction of risk through diversification appeals more to investors than the organic growth through domestic acquisitions. Lastly, the absence of cross-border deals which are unrelated could imply that the likelihood of integration difficulties would make a deal unattractive.

MANAGERIAL IMPLICATIONS

The decrease in Dutch overseas investments in recent times, supported by the fact that despite the CAAR being positive it failed to achieve statistical significance, makes it imperative for managers to pay attention to the value implications of the deals they plan on undertaking.

As shown by the biggest winners in the sample, managers who are determined in increasing their firm's value through acquisitions should look into the value creating effects resulting from cross-border acquisitions within a related industry, to find out if it applies to their firm's setting. Conversely, as shown by the biggest losers of the sample, managers should also look into the value destructive effects of acquisitions which occur in domestic acquisitions within a related industry if they plan on undertaking one, such that the value of their firm does not fall too low.

However regardless of the deal characteristics of the acquisition, even if the internal parties are convinced about the benefits a future acquisition may bring, another potential issue may arise. Specifically, the matter of concern here seems to be the majority of investor perception towards the deals that are about to take place. Taking a cross-border deal as an example; what the managers perceive as a great opportunity, might be perceived as risky by potential investors, which may cause a slump in the stock price prior to an announcement. Managers could attempt to mitigate such risks by taking measures which encourage transparency regarding their goals and intentions about the acquisition, such that potential investors have a greater chance of placing their trust in the firm.

CONCLUSION AND RECOMMENDATIONS

As discussed previously, prior literature is still inconclusive in establishing a general pattern on whether cross-border acquisitions create or destroy value. However, the findings of this research project led to the rejection of the hypothesized relationship that the cross-border acquisitions have a significant negative value towards the Dutch bidder value. The positive CAAR obtained points towards a value creating tendency for cross-border acquisitions as well as domestic acquisitions, though this only qualifies as weak evidence against the theorized costs of overcoming barriers as posited by Erel et al. (2012). Given that results show the opposite, it seems that the value destructive tendencies of cross-border acquisitions are not an explanation towards the decreasing Dutch investment outflow in recent years. Instead, what was revealed through a further examination of the biggest and smallest values of the sample was, as also demonstrated by Aybar and Ficici (2009) and Markides and Ittner (1994), that there is a possibility for the combination of whether the acquisition was cross-border/domestic and related/unrelated to affect bidder value.

The telltale signs of strategy being a determining factor in value implications as shown in the discussion section illustrates the need to incorporate analysis of other factors, not limited to strategy, into the existing analysis of cross-border vs domestic acquisitions. Also shown by (Aybar & Ficici, 2009) and Markides and Ittner (1994), whether the deals are related/unrelated are obviously not the only characteristic that possibly have different effects on the bidder value implications of cross-border/Dutch firms.

In addition, given the statistical insignificance of the CAAR's for this group of Dutch firms, it would be wise for

future research endeavors to focus on either a specific industry in the Netherlands. The need to focus on one industry is illustrated in the case of Mylan NV, a player in the pharmaceutical industry, where the characteristics of the industry possibly plays a role in the overall attractiveness of the bidder firm's stocks. Going down to an industry level may help reveal more patterns as well as explanatory factors behind why some bidding firms gain more from their announcements than others.

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APPENDICES**Appendix A*****Domestic and Cross-border Acquisitions made by 62 listed Dutch companies***

Below is the list of 62 acquisitions which will be used for the event study. All the data below is gathered from the M&A database 'Zephyr'. All the respective stock price data which comes from different markets is available for download in Investing.com.

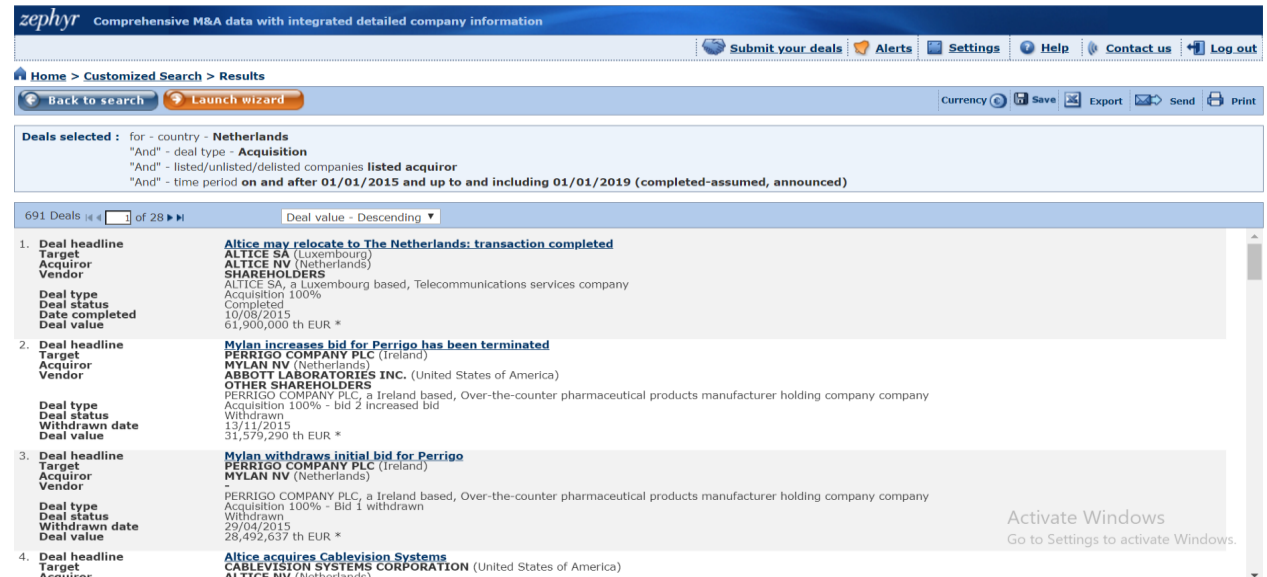
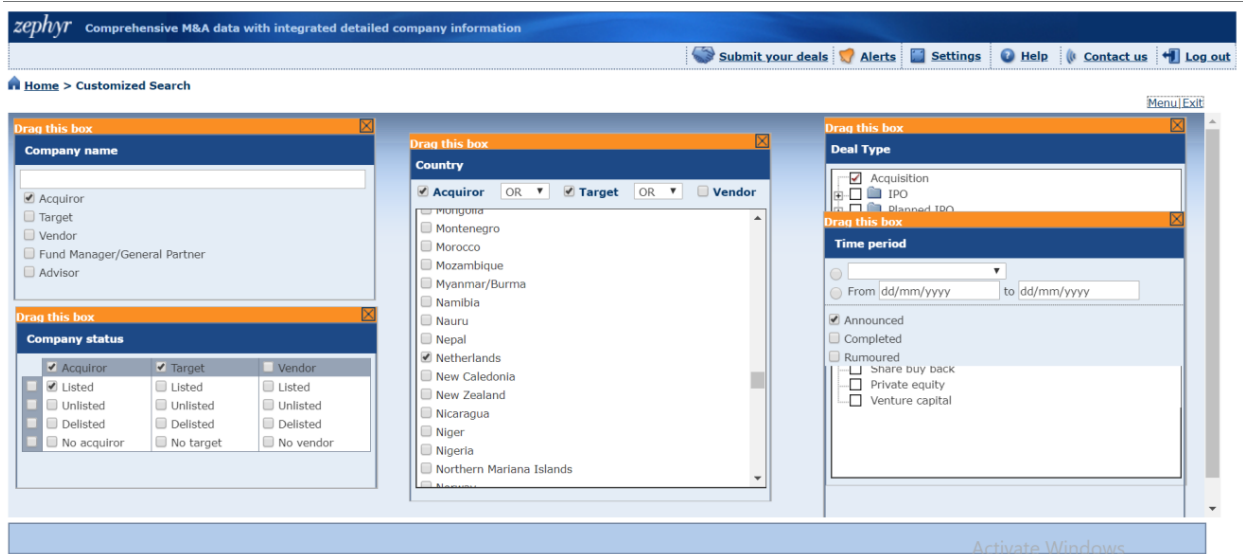
Dutch company A (acquires) company B (Country of origin, Announcement date) (Estimation period)

1. Airbus SE C series Aircraft LP (Canada, 16/10/17) (20/09/16 - 29/09/17)
2. LyondellBasell Industries NV A Schulman Inc.(USA, 15/02/18)(12/01/2017-31/01/18)
3. CNH Industrial NV Kongskilde Industries A/S (Denmark, 31/10/16)(24/09/15 - 14/11/16)
4. Randstad Holding NV Sageco (Australia, 23/11/16)(19/10/15 - 08/11/16)
5. Heineken NV The lagunitas brewing company (USA, 04/05/17)(01/04/2016 - 19/04/2017)
6. X5 retail group NV Tsifrovye Tekhnologi Budushchego OOO (Russia, 04/09/18)(07/08/17 - 20/08/18)
7. Aegon NV Cofunds ltd. (UK, 04/02/16)(31/12/14 - 20/01/16)
8. Steinhoff international Holdings NV Sherwood bedding group (US, 25/05/17) (20/04/2016 - 10/05/17)
9. NN group NV Delta lloyd (Domestic, 02/02/17) (18/01/2017 - 18/01/17)
10. Akzo Nobel NV Colourland paints (Malaysia, 01/11/18)(29/09/17-17/10/18)
11. Mylan NV Meda AB (Sweden, 10/02/2016)(05/01/2015 - 26/01/16)
12. Koninklijke DSM NV Trusco BV (Domestic, 22/09/17)(29/08/16- 7/09/17)
13. Arcadis NV Environmental strategies PTY LTD (Australia, 04/10/2016) (09/09/2015 - 19/09/2016)
14. Koninklijke BAM group NV Tidal Bridge BV (Domestic, 28/05/18)(02/01/18 - 11/05/18)
15. Signify NV Shenzhen LiteMagic Technologies Co. (China, 14/05/18)(12/04/17 - 27/04/18)
16. Koninklijke KPN NV StartReady BV (Domestic, 26/03/18) (02/02/17 - 09/03/18)
17. ASR Nederland NV Loyalis NV (Domestic, 04/12/18)(03/11/17- 17/11/18)
18. Wolters Kluwer NV Evision Industry Software BV (Domestic, 30/10/2018) (27/09/17 - 15/10/18)
19. Euronext NV Ibabs Beheer BV (Domestic, 10/07/2017)(14/06/16 - 23/06/17)
20. Oranjewoud NV Strukton Groep NV (Domestic, 06/03/15) (03/02/14 - 19/02/15)
21. OCI NV Biomethanol Chemie Holding II BV (Domestic, 11/06/2015) (14/05/2014 - 27/05/15)
22. Avantium NV Synvina BV (Domestic, 18/12/18)(20/11/17 - 03/12/2018)
23. Verenigde Nederlandse Compagnie NV DGB Energie BV (Domestic, 05/10/2016) (20/02/15 - 20/09/16)
24. Phelix NV Alumexx BV (Domestic, 28/12/2017)(26/08/16 - 12/12/17)
25. Lavide Holding NV Gastvrij Nederland BV (Domestic, 25/07/2017)(11/05/16 - 10/07/2017)
26. Stern Groep NV Pouw Automotive Noord BV (Domestic, 04/02/16)(08/01/15 - 20/01/16)
27. Sligro Food Group NV Catertech BV (Domestic, 07/07/2015)(06/06/2014 - 20/06/15)
28. DPA Group NV Soza Xpert BV (Domestic, 22/04/2015) (21/03/14 - 07/04/15)
29. ICT Automatisering NV Raster Holding BV (Domestic, 29/06/2015)(30/05/14 - 12/06/15)
30. Koninklijke Boskalis Westminster NV VBMS Holdings BV (Domestic, 07/03/2016) (09/02/15 - 19/02/16)
31. PostNL NV Searchresult BV (Domestic, 04/10/2016) (09/09/15 - 19/09/16)
32. Novisource NV Opdion Services BV (Domestic, 24/02/2017) (01/02/16 - 09/02/17)
33. Koninklijke Brill NV Brill Publishers BV (Domestic, 12/04/2017)(18/03/16 - 28/03/17)
34. Aalberts Industries NV PNEU/TEC BV (Domestic, 18/07/2017)(21/06/16- 01/07/17)
35. Value8 NV Get up (Domestic, 04/10/2017)(07/09/16 - 19/09/17)
36. Philips NV Nightbalance BV (Domestic, 08/05/2018)(06/03/17 - 23/04/18)
37. Royal Wessanen NV Abbot Kinney's BV (Domestic, 10/09/2018)(08/10/17 - 23/08/18)
38. Unilever NV De Kort Weg BV (Domestic, 19/12/2018)(21/11/17 - 04/12/18)
39. Altice NV Cablevision systems Corporation (USA, 17/09/2015)(20/08/14 - 02/09/15)
40. NXP Semiconductors NV Freescale Semiconductor LTD (Bermuda, 02/03/2015)(28/01/14 - 13/02/15)
41. ASML Holding NV Hermes Microvision Inc. (Taiwan, 16/06/2016)(22/05/15 - 01/06/16)
42. Takeaway.com NV Foodora GMBH (Germany, 21/12/2018)(23/11/17 - 06/12/18)
43. Wright Medical Group NV Cartiva Inc. (USA, 27/08/2018)(25/07/17 - 10/08/18)

44. Frank's International NV Blackhawk Group Holdings Inc. (USA, 07/10/2016)(09/10/15- 26/10/16)
45. Qiagen NV Stat-dx life SL (Spain, 01/02/2018)(28/12/16 - 17/01/18)
46. TKH Group NV Lakesight Technologies holding SRL (Italy, 16/10/2018)(15/09/17 - 29/09/2018)
47. ForFarmers NV Tasomix SP (Domestic, 20/02/2018)(20/01/17 - 03/02/18)
48. Cimpress NV Druck- und Handelsgesellschaft Mbh (Austria, 18/03/2015)(12/02/14 - 03/03/15)
49. Lastminute.com Comvel GMBH (Germany, 21/12/2017)(25/11/16 - 06/12/17)
50. Yandex NV Edadil OOO (Russia, 02/10/2018)(29/08/17 - 17/09/18)
51. Ichor Coal NV Penumbra Coal Mine (South Africa, 08/06/2015)(06/05/2014 - 22/05/15)
52. Astarta Holding NV Zlahoda Plyus TOV (Ukraine, 07/11/17)(03/08/16- 23/08/17)
53. Esperite NV Inkaryo corporation (USA, 19/03/2015)(07/02/14 - 04/03/15)
54. Snow world NV Snow planet BV (Domestic, 21/12/2018)(31/07/17 - 06/12/18)
55. Hydratec NV Helvoet BV (Domestic, 09/07/2015)(14/04/14 - 24/06/15)
56. ING Groep NV Makelaarsland BV (Domestic, 20/02/18)(23/01/17 - 05/02/18)
57. Binckbank NV Pritle Holding BV (Domestic, 17/03/2017)(23/02/16 - 02/03/17)
58. Beter Bed Holding NV Betten Max GMBH (Austria, 23/10/2015)(25/09/14 - 08/10/15)
59. Grandvision BV Visilab SA (Switzerland, 01/09/2017)(08/08/16 - 17/08/17)
60. ABN AMRO NV Societe Generale Private Banking NV (Belgium, 30/07/2018)(30/06/2017 - 13/07/18)
61. IMCD NV Chemicals and Solvents East Africa LTD (Kenya, 30/06/2016)(05/06/15 - 15/06/2016)
62. TomTom NV Location Navigation PTY LTD (Australia, 02/04/2015)(05/03/14 - 18/03/15)

Appendix B

The search criteria entered in the Zephyr database for the group of samples can be seen in the screenshots below



Appendix C-1

Below are example calculations of the CAR for the company Unilever.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Price	Open	High	Low	Vol.	Change %	Event Win	-1	0	1	CAR
2	4-Dec-18	49.2	48.2	49.5	48.2	6.61K	1.03%	Event retu	-2.63%	-0.62%	1.67%	
3	3-Dec-18	48.7	49.2	49.4	48.7	1.54K	-0.20%	AR	-2.65%	-0.64%	1.65%	-1.63%
4	30-Nov-18	48.8	48.9	49.1	48.8	5.68K	-0.20%					
5	29-Nov-18	48.9	49.1	49.4	48.5	2.54K	-1.21%					
6	28-Nov-18	49.5	49.2	49.5	48.8	20.19K	0.81%					
7	27-Nov-18	49.1	49	49.1	48.7	6.88K	1.87%					
8	26-Nov-18	48.2	49.2	49.2	48.2	4.25K	-1.63%					
9	23-Nov-18	49	48.5	49	48.5	2.95K	0.41%					
10	22-Nov-18	48.8	48.9	49.2	48.6	8.96K	0.00%					
11	21-Nov-18	48.8	49	49.2	48.8	5.91K	0.00%					
12	20-Nov-18	48.8	48.9	49.2	48.5	1.75K	0.21%					
13	19-Nov-18	48.7	49.2	49.3	48.7	9.15K	-1.42%					
14	16-Nov-18	49.4	49.2	49.4	48.7	1.94K	0.41%					
15	15-Nov-18	49.2	48.3	49.2	48.3	9.00K	1.65%					
16	14-Nov-18	48.4	48.7	48.9	48.4	2.65K	-0.62%					
17	13-Nov-18	48.7	48.9	48.9	48.6	3.81K	0.83%					
18	12-Nov-18	48.3	48.7	48.7	48.3	1.35K	-0.62%					
19	9-Nov-18	48.6	47.8	48.6	47.8	2.31K	2.10%					
20	8-Nov-18	47.6	47.9	48.1	47.6	2.26K	-0.21%					
21	7-Nov-18	47.7	47.8	48	47.6	17.38K	0.00%					
22	6-Nov-18	47.7	47.7	47.7	47.3	2.82K	0.21%					
23	5-Nov-18	47.6	47.5	47.7	47.2	4.68K	0.42%					
24	2-Nov-18	47.4	47.5	47.5	47	2.18K	0.00%					
25	1-Nov-18	47.4	47.2	47.6	47.2	1.86K	-0.63%					
26	31-Oct-18	47.7	48	48.3	47.4	16.77K	0.42%					
27	30-Oct-18	47.5	48.3	48.3	46.9	9.30K	-1.45%					

[TKWY Historical Data](#) |
 [TOM2 Historical Data](#) |
 [TWKNc Historical Data](#) |
 [UNA Historical Data](#) |
 [VA](#)

Appendix C-2

Below are example calculations of CAAR for a group of cross-border samples.

	B	C	D	E	F	G	H	I
1	Name	Ticker	-1	0	1	CAR		CAAR
2	Last Minute.com	09B	0.97%	-0.29%	-0.02%	0.67%		1.25%
3	ABN AMRO	ABNd	0.49%	0.92%	0.57%	1.97%		
4	Aegon NV	AEG	0.49%	0.92%	0.57%	1.98%		
5	Airbus SE	AIRG	0.49%	0.92%	0.57%	1.98%		
6	Akzo nobel NV	AKZOY	1.13%	2.62%	-0.13%	3.62%		
7	Arcadis NV	ARDS	0.69%	1.85%	2.35%	4.90%		
8	TomTom NV	TOM2	1.49%	3.48%	-0.93%	4.03%		
9	ASML Holdings	ASML	0.70%	0.45%	-1.01%	0.13%		
10	Astarta Holding NV	ASTH	-0.85%	-1.47%	0.42%	-1.90%		
11	Altice Holding NV	ATCA	1.31%	0.34%	-2.28%	-0.62%		
12	Beter Bed Holdings	BETR	2.15%	4.86%	0.26%	7.26%		
13	Cimpress NV	CMPR	0.32%	0.40%	-0.41%	0.30%		
14	CNH Industrial	CNHI	2.17%	0.95%	-4.97%	-1.84%		
15	Esperite NV	ESPE	-1.96%	3.08%	0.60%	1.72%		
16	Frank's international Holdings	FI	0.33%	1.31%	-1.22%	0.43%		
17	Grandvision BV	GVNV	0.49%	0.82%	-1.49%	-0.17%		
18	Heineken NV	HEINY	0.20%	-0.18%	-0.06%	-0.04%		
19	IMCD NV	IMCD	4.16%	0.87%	0.52%	5.56%		
20	Ichor Coal NV	IOO	0.02%	0.02%	0.02%	0.06%		
21	Signify NV	LIGHT	-0.45%	1.13%	-2.47%	-1.79%		
22	Lyondell Basell NV	LYB	2.02%	-1.94%	-1.37%	-1.28%		
23	Mylan NV	MYL	0.54%	-0.42%	-18.08%	-17.97%		
24	NXP Semiconductors	NXPI	-2.10%	2.15%	-0.24%	-0.20%		
25	X5 Retail group	PJPq	0.34%	0.61%	-1.31%	-0.36%		
26	Qiagen NV	QGEN	-1.02%	1.45%	-2.01%	-1.58%		
27	Randstad Holding NV	RAND	1.74%	-2.67%	0.20%	-0.74%		
28	Steinhoff International Holdings	SNHG	0.73%	-0.59%	1.45%	1.59%		
29	Takeaway.com	TKWY	-1.23%	28.27%	-2.80%	24.24%		
30	TKH Holdings NV	TWKNc	-1.96%	6.25%	-0.76%	3.52%		
31	Wright Medical group NV	WMGI	0.26%	-4.25%	5.53%	1.55%		
32	Yandex NV	YNDX	-1.33%	0.81%	2.09%	1.58%		

Appendix D

Example SPSS output for the normality tests of the cross-border samples.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Minus_one	.152	31	.066	.952	31	.181
Zero	.273	31	.000	.517	31	.000
Plus_one	.238	31	.000	.634	31	.000
CAR	.265	31	.000	.697	31	.000

a. Lilliefors Significance Correction