ERASMUS UNIVERSITEIT ROTTERDAM
**ERASMUS SCHOOL OF ECONOMICS**

*Master Thesis*

# Factors influencing deal success in M&A:
# The impact of merger spread and cultural differences on deal success in mergers and acquisitions

by

Xander Diederen

Supervisor: Dr. C.M. Lin

Student number: 389241

Date: February 21st 2016

## Abstract

This research explores the relation between merger spread and deal success on the one hand, and cultural differences between target and acquirer and deal success on the other hand. A sample over the period of January 1$^{st}$ 1995 until January 1$^{st}$ 2014 has been extracted from the M&A SDC Database by Thomson and supplemental missing data has been extracted from the Datastream database. The geographical focus of this paper is based on the restriction that all acquirers are located in the US while targets are located globally. With respect to merger spread, significant negative results are found for domestic US deals only. Regarding the relation between cultural differences between target and acquirer, significant negative results have been found, indicating that these differences reduce the chance on deal success. Furthermore, based on both literature and to some extent intuition, a variety of control variables are added in the attempt to show more accurate results.

**Keywords: merger spread, merger arbitrage, cultural differences, deal success, mergers and acquisitions**

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# 1 Introduction

In the process of mergers and acquisitions (M&A) an initial offer by the acquirer is made for a certain amount per share. Negotiations initiate and when the deal is closed, the share price of the target will be equal to the price paid by the acquirer (in case the acquirer seeks to acquire 100% of the shares). When the announcement of a merger or takeover attempt is made, the stock price of the target generally rises to a certain level that is below the offered price in the takeover attempt. One would expect the market price of the stock to start rising until the offered price has been reached. By doing so, traders could benefit from the deal announcement by going long (buying the target stock) when the announcement is made and shorting the relevant stock (selling the target stock) when the offer price is reached and the deal is closed. However, the risk of a failed takeover always exists and investors have to take this risk into account when trading on a deal announcement. This difference between the offered price and the closing price of the stock after the announcement has been made public, is called the arbitrage spread or merger spread and represents the probability of deal success, as estimated by investors. This paper will focus only on the factors influencing the deal process and will not investigate what happens to either the target or the acquirer when a deal is closed.

There are several studies available that found different variables having a significant influence on deal success (Branch & Wang, 2008). However, a variable that is often neglected when investigating the level of deal success is the level of cultural fit between the target and an acquiring firm. Intuitively, one can assume that if the cultural difference between a target and an acquiring firm is significantly large, problems can occur with respect to the deal process. Therefore, the research questions of this paper can be stated as follows:

*What is the relation between the merger spread and the probability of deal success and what is the impact of cultural differences between the target and the acquirer on the probability of deal success?*

By creating a sample of global deals with a deal value higher than 10 million USD in the period of January 1st 1995 until January 1st 2015 the effect of merger spread and cultural fit on the probability of deal success will be examined.

With respect to these restrictions, the following hypotheses are examined in this paper:

*H1: Merger spread has a significant negative influence on the deal success rate.*

*H2: Cultural differences between target and acquirer have a significant negative influence on the deal success rate.*

The main findings of the paper indicate that indeed a significant negative relation exists between merger spread and deal success for domestic US deals only. Furthermore, a significant negative relation exists between cultural differences and deal success, indicating that these cultural differences reduce deal success.

The remaining structure of the paper is as follows. In section 2, the existing theories regarding this topic will be investigated and a theoretical framework will be constructed. In section 3, a data description will be provided. In this description included data and variables will be elaborated on. After this, the methodology of the paper will be explained in section 4 followed by the results in section 5 for both H1: The merger spread hypothesis; as well as H2: The cultural fit hypothesis. Finally, a conclusion will be given and several limitations/incentives for future research will be given in sections 6 and 7.

## 2 Theory

This section will elaborate on previous studies regarding the topic of merger spreads. Proven determinants of deal success will be discussed and a cultural measurement system will be explained. Furthermore, other factors influencing merger spread will be discussed.

### 2.1 M&A in general

M&A has been an important research subject in the area of finance. There has been a lot of focus on the wealth creation effects by means of creating new synergies and researchers also focused on whether or not investors in the market could benefit from the merger process by means of trading (Branch & Yang, 2003). This paper will focus more on the market/trading side of the M&A process.

In the 1990's, M&A activity broke all standing records both in terms of number of transactions as well as size of those deals and even though the global economy cooled down and went into recession in the 2000s, the M&A deal volume remained high (Stahl & Voigt, 2003). As previously mentioned, mergers occur with as main goal, the creation of synergies. In general, there are three types of mergers; *horizontal mergers* where two firms combine in the same line of business, *vertical mergers* where two firms combine that are already active in the same line of business but at a different stage of production and the *conglomerate merger* where two companies of unrelated lines of business merge. Often resulting from these mergers are synergies. However, there are several types of synergies. When a horizontal merger occurs the goal is often economies of scale where benefits are reaped by combining for instance, accounting, financial control, executive development and top-level management, thereby creating cost advantages. Economies of vertical integration usually occur in case of a vertical merger. By gaining control of a company that is active higher or lower in the production chain, advantages can be achieved. However, nowadays this type of merger is not that common since a lot of price advantages are obtained by means of outsourcing. When there is a difference in size between two firms, the reason for a merger is often that of complementary resources from either party. A small firm could have a unique product but might lack the organizational or financial structure to produce this product on a larger scale. By combining resources with a larger firm, both firms could benefit from this transaction. In case a firm has a lot of excess cash it often tries to create synergies in a more financial way. If operational opportunities are not at hand in a

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certain industry due to the mature nature of the industry, a firm can start investing in companies in completely different lines of industry. This particular merger strategy is for instance popular with large oil conglomerates who do not want to be solely dependent on oil (Braeley, Myers, & Allen, 2011).

However, as theory implies that advantages occur when a company enrolls in an active M&A strategy, empirical research does not necessarily confirm these theories. An example of a possible explanation for this phenomenon lies in the fact that acquirers often pay a significant premium that ranges between 10 to 35 percent of the target's preannouncement market value. This cancels out value creation that might be otherwise obtained by establishing new synergies (Christofferson, McNish, & Sias, 2004).

## 2.2 Merger spread

One of the main independent variables of this paper will be the merger spread or risk-arbitrage spread. When an announcement of a deal has been made public, the target share price usually tends to rise but remains just below the offer price. With respect to cash offers, investors can take on a long position in the target stock. If the deal is closed investors can obtain the positive spread between the target share price and the offer price and make a profit from this difference. Furthermore, the acquiring company could have exposure to dividend paid by the target company. The same goes for stock offers but since the acquirers share price tends to decrease in a stock deal, investor both short the acquirers stock and take on a long position in the target stock. Also, in the case of a stock deal, both dividend is paid (on acquirer's stock) and received (on target stock) (Mitchell & Pulvino, 2001). However, if in both cases the deal should fail, investors will not be able to sell the stock for the offer price and they will most likely obtain losses. The merger spread is therefore defined as the percentage difference between the offer price and the target share price after the announcement (Branch & Wang, 2008).

Extensive research on the topic of merger spread already exists. Focus of these topics often relate to factors affecting the merger spread. By focusing on these topics, researchers tried to find economic relations between ex-ante and ex-post deal announcement factors which would make it possible to perform trades when a deal would be announced and thereby making profits from the announcement. Branch & Wang (2008) focus on a variety of ex-ante variables for both cash as well as stock deals. They found the following relations to have a significant role in determining

the merger spread for cash offers: *Target market-to-book* (at the end of the year before the announcement) which represents growth potential, *target price run-up* (cumulative abnormal return of target's stock price, 15 trading days to 1 trading day before the announcement), *target termination fees* (if termination fees were agreed upon if the deal should fail), *transaction cost* (test if merger spread is greater when the target stock price is less than 5$ which would imply transaction cost of the deal are relatively high), *deal attitude* (friendly or hostile deals), *arbitrageurs activity* (abnormal trading volumes in the days before the announcement), *the relative size of target* (target market value divided by acquirer market value) and *the bid premium* (calculated as the percentage difference between the offer price and the target market price 15 trading days before the deal announcement was made). With respect to stock offers they found the *bidder's market risk* (bidders market beta), the *target price run-up*, the *targets relative size*, *arbitrageurs involvement* before the deal, *bidder's return volatility* (volatility of daily returns of 252 trading days to 15 trading days before the announcement) and *bid premium* to have a significant impact on merger spread.

While Branch & Yang (2008) focused on variables that were available before the deal announcement was made, Jindra & Walking (2004) focused on the above mentioned ex-ante variables but also broadened their focus to several ex-post variables such as the duration of the offer and the magnitude of a possible revision, calculated as the percentage difference between the initial offer price and the final offer price. They also found a significant relationship between the merger spread and the above mentioned ex-post variables.

Where some have focused on the variables affecting the merger spread, others focused on the historical development of the merger spread. Jetley & Ji (2010) examined the evolution of the merger spread between 1990 and 2007. They found the merger spread to be declining since the 1990s where the spread in 2001 was 520 bps lower than the merger spread between 1990 and 1995 and 290 bps lower for deals announced between 1996 and 2001. They also investigated possible explanations for this decline in merger spread and found that the decline could be explained by changing characteristics of the deals such as an increase in popularity of cash deals, a decrease in bid premiums and a decrease in the number of hostile deals. Besides changes in characteristics of the deals, over the years an increase in post-announcement trading volume was found.

As mentioned above, an important factor determining the merger spread is the riskiness of a deal. If investors estimate the risk that a deal will fail to be high, they will be less willing to pay a price close to the offer price of the stock. This will result in a higher merger spread. Therefore, intuitively the higher the risk that a deal will fail, the higher the merger spread will be.

## 2.3 Cultural fit

Another part of this paper will focus on the cultural aspect of M&A deals. There has been significant research on M&A performance and cultural factors affecting this performance (Weber, 1996; Stahl & Voigt, 2003). However, most of it is focused on post-transaction performance of the merged entity. This paper will focus on the cultural differences with respect to the deal process. Measuring the level of cultural fit is a difficult task to perform and culture can be defined in many ways (Trice & Beyer, 1994). A popular method of measuring the cultural fit between two organizations is by means of questionnaires (Cooper & Cartwright, 1993). However, since the size of the dataset used in this paper is significantly large, a questionnaire for each transaction is not realistic. Therefore this paper will focus on a different cultural measure, which is related to the cultural fit based on country characteristics.

This paper will try to measure the cultural fit between the target and the acquirer based on the Hofstede Index. The Hofstede index is an index score based on six cultural dimension: *Power Distance, Individualism versus Collectivism, Uncertainty Avoidance, Masculinity versus Femininity, Long-term versus Short-term Orientation* and *Indulgence versus Restraint.* Hofstede developed the initial four cultural dimensions by analyzing worldwide employee surveys collected by the International Business Machines Corporation (Hofstede, 2011). The dimension *Long-term versus Short-term Orientation* was added in the 1980s, based on research by Michael Harris Bond, a Canadian psychologist centered in Hong Kong (Hofstede & Bond, The Confucius Connection: From Cultural Roots to Economic Growth, 1988) and the final sixth dimension, *Indulgence versus Restraint,* was added in the 2000s based on research by Michael Minkov who used data from the World Values Survey (Hofstede, Hofstede, & Minkov, 2010). The indices represent scores for each dimension which can be compared between countries. Since all acquirers in this research are located in the US, the US scores will be taken as benchmark. Again, this part of the research is based on intuition. If the cultural difference scores are high (as defined by Hofstede) the chance of conflicts during the transaction process are higher, therefore making

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the investment more risky for investors. This would result in a lower level of deal success for transactions in which the cultural difference scores are high. Since the cultural differences scores can be either higher or lower in comparison to the US scores, this paper will focus on absolute differences in scores since a cultural difference can occur through either a higher or a lower score and for the sake of transaction success it is irrelevant in which direction the difference goes. Each dimension will be explained and clarified by means of an example in the following sections

### 2.3.1 Power Distance

Hofstede defines power distance as follows: 'the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally' (Hofstede, 2011). In some form, this therefore represents the level of inequality since it captures the image, less powerful people have about their own position relative to the position of their superiors. Hofstede found these power distance scores to be higher for Latin, Asian, African and East European countries and to lower for English-speaking Western Countries (Hofstede, 2011). For clarification purposes, examples of the difference between a large and small power distance can be found in Table A1 of Appendix A

### 2.3.2 Individualism versus Collectivism

Individualism with its opposite, Collectivism, reflects the degree to which cultures and societies are integrated into groups. An individualistic culture is characterized by loose ties between individuals resulting in an environment where everyone looks after him/herself or his/her close family. Collectivism on the other hand is an culture where people are integrated into cohesive groups, often large families that offer protection and guidance in exchange for loyalty. Where individualism often prevails in the more developed and Western cultures, collectivism is often found in more Eastern cultures such as for instance Japan (Hofstede, 2011). For clarification purposes, examples of the difference between individualism and collectivism can be found in Table A2 of Appendix A

### 2.3.3 Uncertainty Avoidance

Uncertainty avoidance, not to be confused with risk avoidance, deals with the degree of cultural acceptance regarding uncertainties. It reflects the extent to which an individual is taught to feel comfortable in uncomfortable or unstructured situations. Unstructured situations are situations

that cannot be anticipated on and are different from normal. By applying strict codes, rules and laws, cultures with a high degree of uncertainty avoidance try to minimize the exposure to these unstructured situations. Uncertainty avoidance tends to be high in Eastern and Central European, Latin and German speaking countries and is often lower in Nordic, Chinese and English speaking cultures (Hofstede, 2011). For clarification purposes, examples of the difference between a strong and weak uncertainty avoidance can be found in Table A3 of Appendix A

### 2.3.4 Masculinity versus Femininity

Masculinity and femininity scores reflect the way in which values between genders are distributed. Masculine values are characterized by assertive and competitive where feminine values often reflect a more modest and caring nature. However, this not necessarily means that feminine cultures are over-represented by a female population and likewise, masculine cultures are over-represented by a male population. Having said so, the original IBM study, used to obtain the first four dimensions, did reveal that female values differ less between different societies than male values. Masculinity is relatively high in German speaking countries, Japan and some Latin countries and relatively low in the Netherlands and the Nordic countries (Hofstede, 2011). For clarification purposes, examples of the difference between masculinity and femininity can be found in Table A4 of Appendix A

### 2.3.5 Long-term versus Short-term Orientation

This fifth dimension is based on a questionnaire among students in 23 countries designed by Chinese scholars. The study's primary author is Michael Harris Bond who labeled the dimension *Confucian Work Dynamism.* With the permission of Bond, Hofstede used this dimension in his four dimensions framework and renamed it for a more general purpose (Hofstede & Bond, 1988). The long-term values represent perseverance, thrift, focus on status and the awareness of shame where the short-term values represent a strong obedience of social obligations, respect for tradition, steadiness and stability. This fifth dimension was initially integrated into the dimensions model in 1991 (Hofstede, 1991) and was more closely analyzed in 2001 (Hofstede, 2001) and in 2005 (Hofstede & Hofstede, 2005). With respect to the geographical presence, long-term oriented cultures are found in East Asian countries, followed by European countries, while short-term oriented cultures are typically found in the US, Australia, Africa, Latin America

and Muslim countries (Hofstede, 2011). For clarification purposes, examples of the difference between long-term and short-term orientation can be found in Table A5 of Appendix A

### 2.3.6 Indulgence versus Restraint

Both Geert Hofstede and his son Gert Jan Hofstede engaged in a collaboration with Michael Minkov in 2010 (Hofstede, Hofstede, & Minkov, 2010) which led to the introduction of the sixth dimension. The dimension was based on the World Values Survey, covering more than 100 countries on a global scale. The questionnaire includes over 360 forced-choice questions in a variety of areas such as economy, ecology, emotions, education, gender, family, politics, government, leisure, happiness and several other areas. The dimension is slightly complementary to long-term versus short-term orientation due to the fact that it is weakly negatively correlated with it. Indulgence in a society is defined by Hofstede (2011) as: 'a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun' (p.15). Restraint is the opposite of indulgence and is therefore characterized by a more controlling culture with respect to gratification by means of strict social norms. Indulgent cultures are found in North and South America, Western Europe and in parts of Africa. Restraint cultures are often more present in Muslim countries and parts of Asia (Hofstede, 2011). For clarification purposes, examples of the difference between indulgence and restraint can be found in Table A6 of Appendix A

### 2.4 Deal Success

The main dependent variable in this research will be whether or not a deal succeeds. Both cultural fit and merger spread will be tested to see if either (or both) have a significant influence on the chance of a successful deal. But according to various other research papers other factors influence the chance of a successful deal as well. These other factors will be added as control variables and the theory behind their influence will be explained in the following sections.

### 2.4.1 Relative Firm Size

The influence of the size of the target on the chance of deal success has been subject to various research papers. Some literature states that the size measured in market value does have a significant influence on takeover success while others claim to prove the opposite.

Size of the target was part of the research paper by Hoffmeister & Dyl (1981). They found target size (as measured by the total market value of all common shares outstanding) to have significant influence on the success of a tender offer. The intuition behind this is that the higher the market value of the target firm, the larger the resources are to oppose a possible takeover. However, they focused their research on cash tender offers and therefore neglected the deals that were based on a tender offer by stock or a tender offer with a combination of stock and cash. On the other hand Cotter, Shivdasani, & Zenner (1997) and Schwert (2000) found firm size, as measured by the logarithm of equity market value of the target firm, not to have a significant influence on the success of a takeover.

Branch & Yang (2003) follow a slightly different approach when it comes to defining the firm size. They look at the relative size of the target firm by dividing the log of the market value of the target by the log of the market value of the acquiring firm. They found the relative size variable to be significantly negatively related to takeover success. By doing so, they took both the acquirer as well as the target size into account, thereby creating a more complete variable. This paper will follow their approach.

*2.4.2 Deal Attitude*

Another important factor affecting the success of a deal is the attitude of the deal. Some deals are characterized as hostile, which means that the acquirer does not negotiate deal terms with the management in place but goes straight to the shareholders (Braeley, Myers, & Allen, 2011), thereby not taking into account any advice of the management in place and often replacing the management if the takeover is accomplished (Shivdasani, 1993). A hostile takeover often occurs after negotiations with management have failed. Intuitively, when first negotiations with management have failed and more negotiations with shareholders are needed, this complicates the deal process, thereby increasing the risk of a failed deal. This means friendly deals have a higher chance of success.

Schwert (2000), Walkling (1985) and Baker & Savasoglu (2002) found this theory to be true in their research regarding this topic and furthermore found deal attitude to be one of the most important determinants in the prediction of deal success.

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### 2.4.3 Termination Fee

In some cases of M&A, a termination fee clause is introduced at the beginning of the deal process. Such a clause can be introduced by both the acquirer, target or both. This clause requires the target (acquirer) to pay a fixed fee to the acquirer (target) in case the merger does not get consummated. These termination clauses therefore act as an additional motivator to successfully complete the deal (Officer, 2003). With respect to this theory, Officer (2003) found target termination fees not to be harmful to target shareholders. Even more so, they found their results to be consistent with their hypothesis that target termination fees induce the bidder to stay in the deal process and keep bidding.

Bates & Lemmon (2003) also found target termination fees to substantially increase the probability of a succesfull deal and furthermore found target termination fees to be associated with significantly larger deal premiums. With respect to acquirer termination fees, they found evidence that supports their hypothesis (the insurance hypothesis) that suggests that targets value acquirer termination fees higher in cases where the costs of bid failure and negotiations are relatively higher. Following up on this literature, this paper will take into account both target and acquirer termination fees

### 2.4.4 Payment Method

Another important factor in determining deal success is the method of payment that is agreed upon during a transaction. A variety of payment structures can be constructed. However, for the sake of comparison, this paper will only focus on all cash deals, all common equity deals or a combination of cash and common equity. Deals with payment by preferred shares or other hybrid payment structures will be excluded from the dataset since they require a variety of different calculations with respect to merger spread that make comparing them significantly more complicated.

When discussing financing structure topics, one of the key theories discussed in prominent literature is that of the pecking order theory. The pecking order theory provides a framework regarding the sources of funds a firm should use when making an investment decision. Key in this framework is the fact that investors should prefer internal funds generated through their own operations and if these funds are exhausted, they should turn to external funds such as debt and

leave the option of attracting new external equity as a last resort (Butler, 2008). The principle of asymmetric information is key to the theory of the pecking order. This has to do with the fact that managers of a firm know more than investors and therefore, if acting rational, will issue new stock if their share price is overvalued. Since management has more information about the company, they can make better estimates of the value of their own shares. On the other hand, if they observe that their own shares are undervalued, they will not issue new stock and would rather attract new debt or turn to internal funds. Therefore, a new equity issue is usually a sign of an overvaluation and causes the share price to drop. Since management is also aware of this form of signaling, they will usually prefer internal funds or debt over a new equity issue when attracting funds for a new investment (Brealey, Myers, & Marcus, 2012).

Research testing the above theory is not consistent per se. Branch & Yang (2003) found that compared to cash deals, stock swaps have a significant negative impact on deal success. They also compared cash deals to collar offers (type of payment agreement based on payment by shares with the goal to keep the final deal value constant, even if target or acquirer share prices fluctuate) however, the variable for collar offers was not significant and was dropped from the model. In later research, Branch, Wang & Yang (2008) also found stock swap offers to have a significant negative impact on the success of merger attempts. Baker, Pan & Wurgler (2012) on the other hand found their cash dummy variable to have a significant negative coefficient with respect to deal success indicating cash deals to have a negative impact on deal success.

### 2.4.5 Industry Fit

In most cases, M&A has as main goal to achieve synergies. Intuitively these synergies could be achieved more easily in the same industry due to industry expertise of the acquiring firm, which could result in economies of scales and therefore leading to more successful deals when firms are active in the same industry. On the other hand, in the case of different industries, M&A could occur for diversification purposes indicating higher deal success in deals between different industries. Therefore, the theory is not necessarily consistent about this topic.

Jindra & Walkling (2004) created an industry variable to test the above theory that is equal to one if a deal would occur in the same industry (as defined by the primary SIC code) and zero otherwise. They found their industry fit variable to have no significant relation to their results.

This paper will also test a different measure of industry. Besides the SIC code, the macro industry code and the mid industry code as provided by the SDC Database will also be tested.

### 2.4.6 Bid Premium

The bid premium represents the premium that is offered by the acquirer to the target firm. There has been some discussion with respect to whether or not the bid premium has a significant influence on deal success. Initially, literature such as Pelligrino (1972), Ebeid (1974), and Hoffmeister & Dyl (1981) claim to have found no significant relationship between bid premium and deal success. However, Walkling (1985) does find bid premiums to have a significant effect on deal success and states that the previous insignificant findings relate to a failure in correctly specifying the bid premium.

More recent literatures is in line with earlier research by Pelligrino (1972), Ebeid (1974), and Hoffmeister & Dyl (1981). For instance, Branch & Yang (2003) find the bid premium variable not to be statistically significant and neither do Mitchell & Pulvino (2001). Although literature is not consistent with respect to this variable, it will still be added to the initial model as a control variable.

### 2.4.7 Market Performance

Another factor that could influence the success rate of  deals is the market performance during the deal process. Intuitively, when a market is moving upwards during deal negotiations, both the target and the acquirer are more positive about their own outlook. For the acquirer this could mean they are more willing to place a higher bid since they believe they have more money to available for the deal. Furthermore, the acquirer could believe the target will be more profitable due to the positive market conditions. This could result in a higher bid acceptance rate by the target firm since they get higher bids.

Mitchell & Pulvino (2001) tested the above theory by looking at monthly CRSP market index return in the month of the resolution date of the deal and the monthly CRSP market index return one month prior to the resolution date of the deal and found both to have a significant impact on deal success. However, it must be noted that Mitchell & Pulvino (2001) have a different definition of deal failure since they also classify a deal as failed if during the deal process the bid is revised downwards, even though the deal closes in the end. In trying to link the market

performance more accurately to each transaction, this paper will add both the market index performance where the target is listed, as well as the market index performance where the acquirer is listed, as a control variable.

### 2.4.8 Duration

The duration of a deal is measured by the number of days between the initial announcement and the date that the deal is either closed or withdrawn. For several arbitrage spread studies, the main goal is to find significant variables that are available before the initial deal announcement, thereby making it possible for traders to adapt their arbitrage strategies and to make a profit by trading on this new strategy. It is for this reason that in several studies, the duration variable is taken out of the regression since duration can only be measured when the deal is closed or withdrawn.

While duration was not added as a variable in the final regression model, by looking at purely the observations, Branch & Yang (2003) found duration to be shorter for successful deals versus unsuccessful deal attempts. In contrast, Jetley & Ji (2010) found the opposite with an average duration of 130 days for successful deals, compared to a duration of 112 days for deal attempts that ultimately failed.

### 2.4.9 Target Market-to-Book Ratio & Deal Value

While previous research does not necessarily investigate the relation between the target market-to-book ratio and deal success, research such as that of Branch & Wang (2008) did investigate the relation between the target market-to-book ratio and merger spread. Even though they found insignificant results, this paper will investigate the relation between the market-to-book ratio and deal success by adding it as a control variable. The target market-to-book ratio is often thought of as an proxy for future growth potential (Branch & Wang, 2008). The higher the market value exceeds the book value, the more attractive the target firm can be. Intuitively, this could affect the level of effort an acquirer would exercise during the transaction process in successfully closing the deal. On the other hand, this could mean the target firm has a higher potential value, therefore leading to a stronger bargaining position of the target firm, causing the negotiation process to be more harsh.

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Furthermore, this research will also add deal value as a control variable. Previous research did find a significant negative relation between deal value and the post transaction performance of both firms. The rationale behind this was that smaller deals are easier to integrate with the acquiring firm and therefore perform better when the transaction is completed (KPMG, 2011). However, with respect to deal value and deal success, one could expect that in case of large deals, the stakes are higher for both parties, and therefore both parties are more willing to keep the negotiation process on track and successfully close the deal.

## 3 Data

This section will describe the data collection process and give a clear overview of the observations collected and their sources. Furthermore, it will summarize the data found and describe the solution for dealing with the missing data of the SDC Database.

### 3.1 General

As mentioned before, this paper will test two relations. It will test the impact of merger spread on the probability of deal success and furthermore, it will test whether or not cultural fit between the target and acquiring firm has any influence on deal success. In doing so, the dataset consists of mergers either completed or withdrawn between the period of January $1^{st}$, 1995 and January $1^{st}$, 2015. The main data is collected from the SDC Database provided by Thomson One. However, since a significant amount of data for the control variables was missing in this database, the Datastream Event Study Tool was also used as a supplement. The linking process will be explained in a later section of this paper. Furthermore, the following searching constraints where used in establishing the initial database:

- Acquirer is located in the US.
- Target is located globally.
- Percentage of shares sought is equal to 100%.
- Consideration offered is either cash or common equity or a combination of both.
- Minimum deal value is 10 million USD

The fact that only the percentage of shares sought is equal to 100% relates to the fact that if this percentage decreases, intuitively the effect on merger spread also decreases making different

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transactions incomparable. If for instance the market share price is 5 USD and there is an offer price of 10 USD for only 50% of the shares it is not necessarily the case that the this offer of 10 will also hold for the other 50% of the shares. Investors know this and therefore take this into account when trading the target shares. Furthermore, the consideration offered is restricted to either cash of common equity or a combination of both. In the case of complex hybrid payment structures, the merger spread has to be calculated in different ways.

Therefore, for comparison purposes this paper is restricted to the above considerations. The final dataset used in this paper consists of 2998 observations of which 2756 are inter-US[1] and 242 are foreign[2].

In composing the dataset for this paper, two different databases are linked. In doing so, a linking bias is present to some extent. This linking bias is corrected for by winsorising the dataset at a 1% (two-sided) level. This means the top and bottom 1% of the observations are left out, correcting for extreme (incorrect) values. This is done for every variable in the dataset.

### 3.2 SDC Database & Datastream Event Study Matching Tool

Due to the variety of control variables that were added in the regression, a significant amount of data was not available when only using the Thomson One SDC Database. This led to a great amount of lost observations. By using the Datastream Event Study Matching Tool, most transactions could be linked to the Datastream database by means of their Datastream code. In doing so, lost data such as historical market prices and market caps could be added, thereby making the observations complete so they could be used in the final dataset. This was especially helpful for international transactions. However, in doing so Datastream codes had to be available in the SDC Database which was not the case for every observation. Another control variable that is added in the regression is the market index performance of both the acquirer and the target firm. The Datastream Event Study Matching Tool also made it possible to add the relevant market index performance (the performance of the index where both the acquirer as well as the target was listed).

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[1] Both target and acquirer are located in the US.
[2] Acquirer is located in the US; Target is located in one of the following countries: Australia, Bermuda, Canada, China, Denmark, Finland, France, Greece, Ireland-Republic, Italy, Japan, Jersey, Netherlands, Norway, Singapore, South-Korea, Switzerland, Taiwan, United Kingdom

## 3.3 Data summary

Table 1 gives a broad data summery of all implemented independent variables. All numbers are averages, given either per year or per location, except for the number of observations. Furthermore, the total average numbers are given. For instance, the average overall bid premium between the period of January 1$^{st}$ 1995 and January 1$^{st}$ 2015 is 39% which is relatively in line with the finding of Kengelbach & Roos (2011) who found an average of 36% bid premium between 1990 and 2010. Furthermore for the years 2001, 2002 and 2008 negative market returns can be observed for both the target index and the acquirer index. This could be related to the financial crash that occurred in those years. One could also expect deal success rates to be lower in those same years, however, such a relatively lower success rate can only be observed in 2008 and not 2001 or 2002.

Table 2 represents the correlation levels between the independent variables. Based on the assumption that correlation levels are moderate till a level of 0.7, there are two variables that show a correlation level classified as extremely high (0.9824) namely *Acquirer Market Return* and *Target Market Return* (Andrews University, 2005). To correct for this correlation, only one variable will be used in the final model.

*Table 1*

| | Nr. of observ. | % Successful | % Cash Only | % Stock Only | Deal Value | % Friendly | % Industry Fit | Relative Size | Bid Premium | Duration | % Trgt. Term. Fee | % Acqr. Term. Fee | Trgt. MVTBV | Trgt. Mrkt. Return | Acqr. Mrkt. Return |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Year* | | | | | | | *Mean values of variables per year* | | | | | | | | |
| 1995 | 29 | 59% | 17% | 62% | 455 | 59% | 28% | 0.89 | 33% | 127 | 28% | 7% | 2.0 | 12.3% | 12.3% |
| 1996 | 32 | 56% | 6% | 81% | 1808 | 72% | 38% | 0.74 | 35% | 169 | 28% | 16% | 2.5 | 9.4% | 9.4% |
| 1997 | 173 | 89% | 16% | 74% | 926 | 93% | 37% | 0.73 | 32% | 134 | 57% | 16% | 3.7 | 15.3% | 15.5% |
| 1998 | 299 | 90% | 25% | 71% | 2056 | 97% | 33% | 0.73 | 45% | 134 | 54% | 14% | 4.4 | 9.0% | 9.1% |
| 1999 | 323 | 87% | 28% | 64% | 1376 | 95% | 32% | 0.69 | 45% | 134 | 58% | 16% | 3.4 | 10.6% | 10.6% |
| 2000 | 269 | 83% | 27% | 62% | 1438 | 95% | 30% | 0.72 | 42% | 117 | 57% | 22% | 4.1 | 4.4% | 4.3% |
| 2001 | 195 | 91% | 25% | 59% | 1021 | 97% | 38% | 0.68 | 45% | 122 | 74% | 23% | 2.3 | -8.8% | -8.8% |
| 2002 | 114 | 90% | 45% | 39% | 693 | 96% | 26% | 0.66 | 43% | 128 | 71% | 21% | 2.9 | -8.4% | -8.7% |
| 2003 | 162 | 93% | 36% | 39% | 988 | 94% | 38% | 0.70 | 38% | 130 | 62% | 20% | 2.5 | 9.5% | 9.9% |
| 2004 | 164 | 89% | 38% | 34% | 1528 | 97% | 37% | 0.74 | 29% | 130 | 83% | 24% | 3.1 | 6.2% | 6.2% |
| 2005 | 156 | 92% | 43% | 26% | 2031 | 95% | 40% | 0.72 | 30% | 131 | 85% | 25% | 2.9 | 5.7% | 5.2% |
| 2006 | 168 | 87% | 58% | 23% | 1946 | 93% | 36% | 0.74 | 30% | 123 | 75% | 16% | 2.9 | 5.6% | 5.4% |
| 2007 | 185 | 85% | 49% | 21% | 1407 | 96% | 37% | 0.77 | 34% | 132 | 79% | 18% | 2.8 | 6.8% | 6.4% |
| 2008 | 122 | 73% | 57% | 24% | 1868 | 85% | 43% | 0.75 | 40% | 111 | 68% | 21% | 3.0 | -9.4% | -9.9% |
| 2009 | 90 | 78% | 38% | 34% | 1751 | 96% | 37% | 0.71 | 46% | 121 | 76% | 17% | 2.1 | 6.7% | 6.8% |
| 2010 | 121 | 84% | 59% | 25% | 908 | 93% | 45% | 0.69 | 50% | 117 | 81% | 28% | 3.3 | 6.3% | 6.2% |
| 2011 | 82 | 82% | 55% | 26% | 2290 | 87% | 48% | 0.75 | 38% | 146 | 84% | 37% | 2.6 | 5.8% | 6.5% |
| 2012 | 100 | 90% | 60% | 20% | 1149 | 96% | 40% | 0.69 | 47% | 125 | 83% | 25% | 2.1 | 7.6% | 8.4% |
| 2013 | 98 | 90% | 53% | 22% | 1634 | 93% | 50% | 0.75 | 32% | 132 | 69% | 24% | 2.6 | 10.5% | 10.8% |
| 2014 | 116 | 88% | 34% | 34% | 3994 | 91% | 47% | 0.77 | 35% | 144 | 68% | 35% | 2.6 | 7.7% | 7.9% |
| *Total* | *2998* | *86%* | *37%* | *45%* | *1491* | *94%* | *37%* | *0.72* | *39%* | *128* | *68%* | *21%* | *3.0* | *5.6%* | *5.7%* |
| *Location* | | | | | | | *Mean values of variables per location* | | | | | | | | |
| Inter-US | 2756 | 88% | 35% | 47% | 1480 | 94% | 37% | 0.72 | 38% | 130 | 71% | 21% | 3.0 | 5.7% | 5.7% |
| Foreign | 242 | 75% | 60% | 25% | 1622 | 88% | 36% | 0.72 | 44% | 103 | 26% | 15% | 3.7 | 5.1% | 5.2% |
| *Total* | *2998* | *86%* | *37%* | *45%* | *1491* | *94%* | *37%* | *0.72* | *39%* | *128* | *68%* | *21%* | *3.0* | *5.6%* | *5.7%* |

*Table 2*

| | MS0 | Deal Success | Cash dummy | Stock dummy | Deal Value | Friendly dummy | Industry Fit | Relative Size | Bid Premium | Duration | Trgt. Term. Fee dummy | Acqr. Term. Fee dummy | Trgt. MVTBV | Trgt. Mrkt. Return | Acqr. Mrkt. Return |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MS0** | 1.0000 | | | | | | | | | | | | | | |
| **Deal Success** | -0.0781 | 1.0000 | | | | | | | | | | | | | |
| **Cash dummy** | -0.0643 | -0.0109 | 1.0000 | | | | | | | | | | | | |
| **Stock dummy** | 0.0689 | 0.0019 | -0.6951 | 1.0000 | | | | | | | | | | | |
| **Deal Value** | -0.0158 | -0.0628 | -0.1180 | 0.0217 | 1.0000 | | | | | | | | | | |
| **Friendly dummy** | -0.0060 | 0.5132 | -0.0910 | 0.0961 | -0.1098 | 1.0000 | | | | | | | | | |
| **Industry Fit** | -0.0163 | 0.0019 | -0.0583 | 0.0046 | 0.0790 | -0.0491 | 1.0000 | | | | | | | | |
| **Relative Size** | -0.1050 | -0.2090 | -0.2401 | 0.1269 | 0.2861 | -0.1855 | 0.1104 | 1.0000 | | | | | | | |
| **Bid Premium** | 0.5349 | -0.0079 | 0.0847 | -0.0479 | -0.0766 | 0.0448 | -0.0289 | -0.3086 | 1.0000 | | | | | | |
| **Duration** | 0.0010 | 0.0783 | -0.3183 | 0.1689 | 0.1640 | 0.0867 | 0.0318 | 0.1580 | -0.0897 | 1.0000 | | | | | |
| **Trgt. Term. Fee dummy** | -0.0227 | 0.2819 | -0.0112 | -0.0826 | 0.0034 | 0.3012 | 0.0203 | -0.0032 | -0.0198 | -0.0176 | 1.0000 | | | | |
| **Acqr. Term. Fee dummy** | 0.0065 | 0.0413 | -0.1951 | 0.1158 | 0.1257 | 0.1045 | 0.0772 | 0.2678 | -0.0694 | 0.1378 | 0.2748 | 1.0000 | | | |
| **Trgt. MVTBV** | -0.0184 | -0.0199 | -0.0179 | 0.0598 | 0.1034 | 0.0259 | 0.0386 | 0.0730 | -0.0286 | -0.0801 | 0.0454 | 0.0286 | 1.0000 | | |
| **Trgt. Mrkt. Return** | -0.0314 | 0.0020 | -0.0711 | 0.0728 | 0.0200 | -0.0344 | -0.0095 | 0.0604 | -0.0973 | 0.0253 | -0.0376 | 0.0008 | 0.0421 | 1.0000 | |
| **Acqr. Mrkt. Return** | -0.0348 | 0.0054 | -0.0690 | 0.0702 | 0.0206 | -0.0361 | -0.0073 | 0.0580 | -0.0991 | 0.0232 | -0.0407 | 0.0033 | 0.0379 | 0.9824 | 1.0000 |

*3.4 Merger Spread*

Table 3 shows the descriptive statistics for the means of the merger spread. MS0 represents the merger spread calculated with the closing share price at the day of the announcement, where MS1 represents the merger spread calculated with the closing price one day after the announcement date. Furthermore, a distinction can be made between the merger spread calculated for inter-US transactions and for the foreign transactions. A more detailed description regarding the calculation of the merger spread will be given in a later section. As can be observed in the table, no foreign transactions were available in the SDC Database for the years 1995 and 1996, due to the fact that control variable data was missing for these years.

With respect to the total means as shown in the bottom row, it shows that for both US transactions as well as for transactions with a foreign target, the merger spread is generally higher for MS0 compared to MS1. This could relate to the fact that when an announcement of a deal has been made public, it takes more than one trading day for all investors to completely anticipate the price increase towards the offer price. As a result, the share price of the target stock increases more one day after the announcement, causing a lower merger spread.

Furthermore, Table 3 shows that the merger spread MS0 is slightly higher for inter-US transactions compared to transactions with a foreign target firm. This could counter-intuitively indicate that inter-US transactions are thought of as more risky compared to transactions with a foreign target firm since investors perceive the chance that the deal will be completed as less likely (and therefore make their bids closer to the offer price).

*Table 3*

| | Inter-US Transactions | | | | | | | | Foreign Transactions | | | | | | | | Total | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *MS0* | | | | *MS1* | | | | *MS0* | | | | *MS1* | | | | *MS0* | | | | *MS1* | | | |
| | *Mean* | *Sd.* | *Min* | *Max* | *Mean* | *Sd.* | *Min* | *Max* | *Mean* | *Sd* | *Min* | *Max* | *Mean* | *Sd* | *Min* | *Max* | *Mean* | *Sd* | *Min* | *Max* | *Mean* | *Sd* | *Min* | *Max* |
| *Year* | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 0.15 | 0.17 | -0.17 | 0.44 | 0.11 | 0.19 | -0.23 | 0.52 | - | - | - | - | - | - | - | - | 0.15 | 0.17 | -0.17 | 0.44 | 0.11 | 0.19 | -0.23 | 0.52 |
| 1996 | 0.17 | 0.31 | -0.33 | 1.10 | 0.10 | 0.22 | -0.33 | 0.81 | - | - | - | - | - | - | - | - | 0.17 | 0.31 | -0.33 | 1.10 | 0.10 | 0.22 | -0.33 | 0.81 |
| 1997 | 0.15 | 0.23 | -0.33 | 1.37 | 0.10 | 0.16 | -0.33 | 1.11 | 0.48 | 0.64 | -0.02 | 1.37 | 0.44 | 0.61 | -0.07 | 1.11 | 0.16 | 0.25 | -0.33 | 1.37 | 0.11 | 0.19 | -0.33 | 1.11 |
| 1998 | 0.19 | 0.25 | -0.32 | 1.37 | 0.14 | 0.19 | -0.33 | 1.11 | 0.05 | 0.07 | -0.04 | 0.23 | 0.04 | 0.03 | -0.02 | 0.11 | 0.18 | 0.24 | -0.33 | 1.37 | 0.13 | 0.18 | -0.33 | 1.11 |
| 1999 | 0.22 | 0.25 | -0.33 | 1.37 | 0.15 | 0.18 | -0.33 | 1.11 | 0.20 | 0.35 | -0.03 | 1.37 | 0.14 | 0.29 | -0.08 | 1.11 | 0.22 | 0.25 | -0.33 | 1.37 | 0.15 | 0.19 | -0.33 | 1.11 |
| 2000 | 0.19 | 0.24 | -0.33 | 1.37 | 0.15 | 0.22 | -0.33 | 1.11 | 0.06 | 0.42 | -0.33 | 1.37 | 0.03 | 0.35 | -0.33 | 1.11 | 0.18 | 0.25 | -0.33 | 1.37 | 0.14 | 0.23 | -0.33 | 1.11 |
| 2001 | 0.16 | 0.25 | -0.33 | 1.37 | 0.10 | 0.18 | -0.33 | 1.09 | -0.01 | 0.25 | -0.33 | 0.22 | -0.01 | 0.26 | -0.3 | 0.25 | 0.15 | 0.25 | -0.33 | 1.37 | 0.09 | 0.19 | -0.33 | 1.09 |
| 2002 | 0.14 | 0.19 | -0.33 | 0.77 | 0.07 | 0.13 | -0.33 | 0.69 | 0.26 | 0.44 | 0.01 | 1.34 | 0.03 | 0.04 | -0.03 | 0.09 | 0.15 | 0.22 | -0.33 | 1.34 | 0.07 | 0.12 | -0.33 | 0.68 |
| 2003 | 0.12 | 0.21 | -0.27 | 1.37 | 0.07 | 0.16 | -0.33 | 1.11 | 0.29 | 0.34 | 0.01 | 1.27 | 0.25 | 0.31 | -0.03 | 1.11 | 0.14 | 0.23 | -0.27 | 1.37 | 0.08 | 0.18 | -0.24 | 1.11 |
| 2004 | 0.12 | 0.22 | -0.33 | 1.26 | 0.06 | 0.16 | -0.33 | 1.11 | 0.15 | 0.14 | -0.06 | 0.39 | 0.10 | 0.14 | -0.05 | 0.40 | 0.12 | 0.22 | -0.33 | 1.26 | 0.06 | 0.16 | -0.33 | 1.11 |
| 2005 | 0.19 | 0.29 | -0.33 | 1.37 | 0.08 | 0.16 | -0.33 | 1.11 | 0.27 | 0.38 | -0.04 | 1.14 | 0.17 | 0.27 | -0.05 | 0.81 | 0.20 | 0.29 | -0.33 | 1.37 | 0.08 | 0.17 | -0.33 | 1.11 |
| 2006 | 0.14 | 0.21 | -0.33 | 1.06 | 0.04 | 0.09 | -0.33 | 0.65 | 0.15 | 0.21 | -0.14 | 0.76 | 0.12 | 0.27 | -0.14 | 1.09 | 0.14 | 0.21 | -0.33 | 1.06 | 0.05 | 0.14 | -0.33 | 1.09 |
| 2007 | 0.15 | 0.25 | -0.31 | 1.37 | 0.07 | 0.15 | -0.31 | 1.11 | 0.13 | 0.26 | -0.20 | 0.90 | 0.10 | 0.26 | -0.17 | 0.91 | 0.15 | 0.25 | -0.31 | 1.37 | 0.07 | 0.16 | -0.31 | 1.11 |
| 2008 | 0.19 | 0.33 | -0.33 | 1.37 | 0.09 | 0.19 | -0.33 | 1.11 | 0.11 | 0.27 | -0.09 | 0.97 | 0.12 | 0.30 | -0.05 | 1.11 | 0.18 | 0.32 | -0.33 | 1.37 | 0.10 | 0.21 | -0.33 | 1.11 |
| 2009 | 0.19 | 0.28 | -0.33 | 1.37 | 0.06 | 0.13 | -0.32 | 0.60 | 0.09 | 0.25 | -0.30 | 0.67 | 0.05 | 0.17 | -0.31 | 0.33 | 0.17 | 0.28 | -0.33 | 1.37 | 0.06 | 0.13 | -0.32 | 0.60 |
| 2010 | 0.15 | 0.28 | -0.33 | 1.37 | 0.06 | 0.17 | -0.33 | 1.11 | 0.10 | 0.12 | -0.06 | 0.33 | 0.07 | 0.12 | -0.13 | 0.34 | 0.15 | 0.26 | -0.33 | 1.37 | 0.06 | 0.17 | -0.33 | 1.11 |
| 2011 | 0.18 | 0.28 | -0.33 | 1.37 | 0.09 | 0.20 | -0.33 | 1.11 | 0.21 | 0.44 | -0.14 | 1.37 | 0.11 | 0.35 | -0.16 | 1.11 | 0.18 | 0.30 | -0.33 | 1.37 | 0.09 | 0.22 | -0.33 | 1.37 |
| 2012 | 0.17 | 0.33 | -0.33 | 1.37 | 0.06 | 0.17 | -0.33 | 1.11 | 0.22 | 0.35 | 0.00 | 1.20 | 0.02 | 0.05 | -0.12 | 0.10 | 0.18 | 0.33 | -0.33 | 1.37 | 0.05 | 0.16 | -0.33 | 1.11 |
| 2013 | 0.11 | 0.19 | -0.33 | 1.37 | 0.05 | 0.15 | -0.33 | 1.11 | 0.11 | 0.19 | -0.21 | 0.45 | -0.01 | 0.11 | -0.22 | 0.22 | 0.13 | 0.25 | -0.33 | 1.37 | 0.04 | 0.14 | -0.33 | 1.11 |
| 2014 | 0.14 | 0.26 | -0.33 | 1.37 | 0.06 | 0.20 | -0.33 | 1.11 | 0.20 | 0.31 | -0.14 | 1.08 | 0.21 | 0.30 | -0.10 | 1.07 | 0.14 | 0.26 | -0.33 | 1.37 | 0.08 | 0.21 | -0.33 | 1.11 |
| *Total* | *0.17* | *0.25* | *-0.33* | *1.37* | *0.10* | *0.18* | *-0.33* | *1.11* | *0.16* | *0.30* | *-0.33* | *1.37* | *0.10* | *0.25* | *-0.33* | *1.11* | *0.17* | *0.26* | *-0.33* | *1.37* | *0.10* | *0.18* | *-0.33* | *1.11* |

## 3.5 Cultural Fit

Table 4 shows the distribution of the scores regarding each cultural dimension. These scores are the average difference in absolute points compared to the US culture scores. When adding up all the scores of the different cultural dimensions as explained in the theoretical section of this paper, a total difference score can be found in the final column. For instance, in 2013 the average total cultural difference compared to the US was 8.94 points per transaction. The relation between these cultural difference points and the chance of deal success will be investigated in the result section of this paper. The total difference score will be tested as well as each cultural dimension separately.

*Table 4*

| Year | Power Distance | Individualism | Masculinity | Uncertainty Avoidance | Long-Term Orientation | Indulgence | Total Difference |
|---|---|---|---|---|---|---|---|
| 1995 | - | - | - | - | - | - | - |
| 1996 | - | - | - | - | - | - | - |
| 1997 | 0.08 | 0.21 | 0.22 | 0.16 | 0.47 | 0.02 | 1.16 |
| 1998 | 0.48 | 0.38 | 0.52 | 0.83 | 1.58 | 0.27 | 4.05 |
| 1999 | 0.20 | 0.29 | 0.53 | 0.33 | 0.79 | 0.13 | 2.27 |
| 2000 | 0.25 | 0.28 | 0.58 | 0.42 | 0.97 | 0.15 | 2.65 |
| 2001 | 0.29 | 0.25 | 0.44 | 0.42 | 0.65 | 0.21 | 2.26 |
| 2002 | 0.67 | 1.52 | 1.02 | 1.22 | 1.95 | 0.59 | 6.96 |
| 2003 | 0.28 | 0.82 | 0.89 | 0.60 | 2.01 | 0.08 | 4.68 |
| 2004 | 0.45 | 1.34 | 0.71 | 1.21 | 1.45 | 0.29 | 5.46 |
| 2005 | 0.18 | 0.40 | 0.41 | 0.34 | 0.88 | 0.08 | 2.29 |
| 2006 | 0.62 | 1.82 | 1.30 | 1.07 | 2.78 | 0.54 | 8.14 |
| 2007 | 0.39 | 1.67 | 1.14 | 0.64 | 2.15 | 0.28 | 6.27 |
| 2008 | 0.69 | 1.39 | 1.14 | 0.75 | 2.17 | 0.56 | 6.70 |
| 2009 | 0.44 | 1.09 | 1.49 | 0.79 | 2.20 | 0.23 | 6.24 |
| 2010 | 0.83 | 1.62 | 1.16 | 0.88 | 2.15 | 0.54 | 7.19 |
| 2011 | 0.22 | 1.24 | 1.16 | 0.41 | 1.50 | 0.08 | 4.62 |
| 2012 | 0.59 | 2.11 | 1.71 | 0.91 | 2.63 | 0.34 | 8.28 |
| 2013 | 0.88 | 2.13 | 1.07 | 1.26 | 2.43 | 1.17 | 8.94 |
| 2014 | 0.62 | 1.17 | 0.76 | 0.83 | 1.44 | 0.23 | 5.06 |
| Total | 0.40 | 0.90 | 0.78 | 0.66 | 1.50 | 0.28 | 4.52 |

Furthermore as can be observed in Table 5 correlation between each individual cultural dimension is relatively high. Therefore they shall not be added to the final regression model simultaneously, but each dimension will be tested in the multivariate model individually.

*Table 5*

|  | Power Distance | Individualism | Masculinity | Uncertainty Avoidance | Long-Term Orientation | Indulgence |
|---|---|---|---|---|---|---|
| **Power Distance** | 1.0000 | | | | | |
| **Individualism** | 0.6928 | 1.0000 | | | | |
| **Masculinity** | 0.6028 | 0.9012 | 1.0000 | | | |
| **Uncertainty Avoidance** | 0.9257 | 0.5587 | 0.5852 | 1.0000 | | |
| **Long-Term Orientation** | 0.8302 | 0.6148 | 0.7235 | 0.9431 | 1.0000 | |
| **Indulgence** | 0.9196 | 0.5927 | 0.4751 | 0.7906 | 0.6478 | 1.0000 |

## 4 Methodology

This section will describe why and which regression models are used. Furthermore, it will explain the formation of the two independent variables of interest, merger spread and cultural fit and there will be a brief elaboration on the control variables used.

In this paper, both the cultural fit relation and the merger spread relation have a common dependent variable which is deal success. This deal success can be either successful or unsuccessful. Therefore, deal success is a dummy variable with the value 1 if successful and 0 if unsuccessful. Because of this, for both the regression with respect to merger spread as well as for cultural fit, a logistic model is used (Institute for Digital Research and Data, 2016). Furthermore, to improve the accuracy of this model, several control variables are added and year fixed effects are included in the regression.

This results in the following regressions. With respect to merger spread:

$Deal\ success =$
$\beta_0 + \beta_1 Merger\ Spread + \beta_2 Cash\ Only + \beta_3 Stock\ Only + \beta_4 Deal\ Value + \beta_5 Attitude + \beta_6 Industry\ Fit + \beta_7 Relative\ Size + \beta_8 Bid\ Premium + \beta_9 Duration + \beta_{10} T\_Term\_Fee + \beta_{11} A\_Term\_Fee + \beta_{12} T\_MVTBV + +\beta_{13} A\_Mrkt\_Ret + \Sigma\beta(Year\ Fixed\ Effects) + \varepsilon$

and with respect to total cultural fit:

$$Deal\ success = \beta_0 + \beta_1 Total\ Cult.Fit + \beta_2 Cash\ Only + \beta_3 Stock\ Only + \beta_4 Deal\ Value + \beta_5 Attitude + \beta_6 Industry\ Fit + \beta_7 Relative\ Size + \beta_8 Bid\ Premium + \beta_9 Duration + \beta_{10} T\_Term\_Fee + \beta_{11} A\_Term\_Fee + \beta_{12} T\_MVTBV + \beta_{13} A\_Mrkt\_Ret + \Sigma\beta(Year\ Fixed\ Effects) + \varepsilon$$

For the control variable $IndustryFit$ several different approaches will be taken. As explained in the theory section of this paper, previous research such as that of Jindra & Walkling (2004) used the SIC code to identify a fit between the target and acquirer. They did not find a significant relation. This paper will apply the same method but will also try the same approach with the mid industry code and the macro industry code as defined by the SDC Database. A univariate model, used to see which industry variable is most significant can be found in Appendix B. Furthermore, as shown before, a high correlation was found between $T\_Mrkt\_Ret$ and $A\_Mrkt\_Ret$, therefore only one of the two will be added in the final model. A further, more extensive explanation of the other control variables can be found in Appendix C

### 4.1 Merger Spread

As mentioned before, one of the variables of interest in this paper is merger spread. This variable is calculated as defined by Jetley & Ji (2010). Their methodology consisted of a number of equations. For cash deals the merger spread is calculated as follows:

$$S_{cash,t} = \frac{P_{offer} - P_{Target,t}}{P_{target,t}} \tag{1}$$

Where $S_{cash,t}$ represents the merger spread for cash deals on trading day t, $P_{offer}$ represents the initial offer price the acquiring company is willing to pay for each share of the target company's common equity and $P_{target,t}$ represents the closing price of each share of the target company at trading day t. All amounts used in calculating the merger spread are in USD.

Jetley & Ji use a different approach when calculating the merger spread for transactions that consist of common equity considerations or a combination of common equity and cash considerations since instead of an initial amount per share, a number of shares of the acquiring company is offered in these transactions. However, when obtaining the initial offer prices from

the SDC Database, the amounts are already converted to cash per share in USD for both cash deals as well as stock deals or a combination between the two. Therefore, the different approach as mentioned by Jetley & Ji is not necessary.

With respect to the regression, the relation between merger spread and deal success will be tested for the total sample (2998 observations), the foreign transactions only (242 observation) and the inter-US transactions (2756 observations). Furthermore, two types of merger spreads will be used. Firstly, by calculating the merger spread with the closing price at *t* in equation (1), consisting of the announcement date of the transaction. Secondly, by including the closing price at *t+1* in equation (1), consisting of the closing price one day after the announcement date.

### 4.2 Cultural Fit

The second independent variable of interest in this paper is the cultural fit between the target and the acquirer during the transaction process. As explained before, this paper will try to investigate to what extent the cultural fit between the target and the acquirer has an influence on the level of deal success. Cultural fit as defined by Geert Hofstede has six dimensions and therefore six scores. In case of an international transaction, the scores on the six dimensions differ from each other due to a different geographical background, leading to a mismatch in cultural preferences. First, all absolute score differences will be added together to create a new variable consisting of the total cultural difference scores. This variable represents the total difference in cultural preferences compared to the US. The relation between this variable and the level of deal success will be tested. Secondly, this paper will test the relation between each separate cultural dimension and the level of deal success. Due to high correlation between the six separate dimensions, they will not be added to the final regression model simultaneously (see Table 5).

The relation between cultural fit and deal success will be tested for the total sample (2998 observations), the international transactions only (242 observation) and the inter-US transactions (2756 observations).

# 5 Results

The results can be divided into two sections which will be treated separately. First the relation between the merger spread and deal success will be evaluated. As mentioned before, the merger spread can be calculated both at *t* and *t+1* indicating both the closing date as well as one day after the closing date will be used in the calculation of the merger spread. This section will elaborate on the results using the merger spread at time *t*. Similar results for *t+1* can be found in Appendix D

Furthermore, the results of the relation between cultural fit and deal success will be presented. This section will focus on the relation between total cultural fit and deal success. The results of the relation between each cultural dimension separately and deal success can be found in Appendix E

## *5.1 Merger Spread and Deal Success*

To begin with, this paper will show the results for the univariate model of merger spread and deal success. As mentioned before, the merger spread can be calculated using two different time periods. By using an univariate model, the difference in both merger spreads can be shown. As can be observed in Table 6, *MS1* has a far larger impact on deal success compared to *MS0*. This difference could be related to the fact that the news of an acquisition might not be implemented in the share prices immediately. However, one trading day after the announcement date, the news of an acquisition could be implemented in the share price more completely, therefore showing a better estimate from the investors point of perspective. This could result in a greater relation between merger spread an deal success. Both the *MS0* as well as the *MS1* variable show significant results at a 1% confidence level for the total sample as well as the Inter-US transaction sample. With respect to foreign sample (US acquirers, acquiring a target outside the US), both the coefficient as well as the model as a whole become insignificant. With respect to the multivariate model, results using the *MS0* variable will be discussed in the following section.

*Table 6*

| *MS0* | Inter-US | Foreign* | Total | Inter-US | Foreign* | Total |
|---|---|---|---|---|---|---|
| Merger Spread | -0.8803*** | -0.1781 | -0.7683*** | -0.8497*** | -0.4192 | -0.7643*** |
|  | (0.1887) | (0.5139) | (0.1798) | (0.1970) | (0.5088) | (0.1845) |
| *Constant* | 2.1139*** | 1.1164*** | 1.9990*** | 0.4765 | 1.6039 | 0.4634 |
|  | (0.0699) | (0.1715) | (0.0649) | (0.3711) | (1.0850) | (0.3715) |
| *Pseudo $R^2$* | 0.0089 | 0.0005 | 0.0069 | 0.0500 | 0.0304 | 0.0420 |
| *Nr. of observ.* | 2756 | 242 | 2998 | 2756 | 232 | 2998 |
| *Fixed Effects* |  | None |  |  | Year |  |
| *MS1* | Inter-US | Foreign* | Total | Inter-US | Foreign* | Total |
| Merger Spread | -1.7101*** | -0.3041 | -1.4724*** | -1.7309*** | -0.5451 | -1.5144*** |
|  | (0.2634) | (0.6101) | (0.2409) | (0.2706) | (0.6067) | (0.2472) |
| *Constant* | 2.1466*** | 1.1205*** | 2.0258*** | 0.5545 | 1.6542 | 0.5279 |
|  | (0.0672) | (0.1644) | (0.0622) | (0.3747) | (1.0323) | (0.3735) |
| *Pseudo $R^2$* | 0.0187 | 0.0010 | 0.0147 | 0.0598 | 0.0309 | 0.0501 |
| *Nr. of observ.* | 2756 | 242 | 2998 | 2756 | 232 | 2998 |
| *Fixed Effects* |  | None |  |  | Year |  |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*
*\* Results for this sample shows evidence of an insignificant model as a whole due to a prob > chi squared, greater than 0.05.*

The multivariate model can be found in Table 7. In this model several control variables are added that were discussed in the theoretical section of this paper. Also for the multivariate model, *MS0* shows a significant negative relation with respect to deal success with a log-odds ratio of  -0.9183. This comes down to an odds ratio of 0.3992 indicating a one unit increase in *MS0* would result in a 0.3992 unit decrease in the odds of deal success, ceteris paribus Intuitively, this would be an indication that a greater merger spread leads to a lower level of deal success. The same significance holds for the Inter-US sample with an log-odds ratio of -0.8129 and therefore an odds ratio of 0.4456. However the *MS0* variable becomes insignificant for the foreign sample.

With respect to the control variables however, not all control variables, when included in the total sample, show the same significance that was described in previous research . The *Cash Only* and *Stock Only* dummy variables show no significant relation to deal success. However, as mentioned before, previous research such as that of Baker, Pan & Wurgler (2012) did find a

significant relation with respect to payment type and deal success. *A_Mrkt_Ret* shows no significant relation while Mitchell & Pulvino (2001) did find a significant relation between market performance and deal success.

*Table 7*

| MS0 | Inter-US | Foreign | Total | Inter-US | Foreign | Total |
|---|---|---|---|---|---|---|
| Merger Spread | -0.8899*** | -0.7231 | -0.9179*** | -0.8129*** | -1.1409 | -0.9183*** |
| | (0.3100) | (0.7422) | (0.2858) | (0.3140) | (0.8523) | (0.2898) |
| Cash Only | 0.2698 | -0.3411 | 0.2054 | 0.2608 | -0.6610 | 0.2107 |
| | (0.2335) | (0.5733) | (0.2132) | (0.2434) | (0.5971) | (0.2202) |
| Stock Only | 0.0693 | -0.9362 | -0.0080 | -0.0343 | -1.6747** | -0.1295 |
| | (0.2010) | (0.5994) | (0.1842) | (0.2218) | (0.6898) | (0.2014) |
| Deal Value | 0.3667*** | 0.2231 | 0.3491*** | 0.4248*** | 0.2646 | 0.3931*** |
| | (0.1107) | (0.2915) | (0.1005) | (0.1152) | (0.3357) | (0.1038) |
| Attitude | 3.4099*** | 3.0559*** | 3.2960*** | 3.5024*** | 3.8271*** | 3.3558*** |
| | (0.2603) | (0.5258) | (0.2259) | (0.2694) | (0.7197) | (0.2331) |
| Industry Fit | 0.5328*** | -0.7087* | 0.3356** | 0.4650** | -0.6045 | 0.3023* |
| | (0.1752) | (0.4042) | (0.1612) | (0.1823) | (0.4506) | (0.1665) |
| Relative Size | -3.3977*** | -2.4359** | -3.293*** | -3.3440*** | -2.9762*** | -3.2711*** |
| | (0.2613) | (1.0741) | (0.3923) | (0.4253) | (1.1105) | (0.3990) |
| Bid Premium | -0.2573 | 0.2753 | -0.1786 | -0.2331 | 0.3876 | -0.1651 |
| | (0.2613) | (0.6513) | (0.2421) | (0.2590) | (0.7402) | (0.2438) |
| Duration | 0.0030** | 0.0032 | 0.0032** | 0.0030** | 0.0032 | 0.0032** |
| | (0.0015) | (0.0031) | (0.0013) | (0.0015) | (0.0028) | (0.0014) |
| T_Term_Fee | 1.2056*** | 0.4134 | 1.1954*** | 1.2754*** | 0.2133 | 1.2616*** |
| | (0.1686) | (0.5443) | (0.1531) | (0.1820) | (0.5462) | (0.1623) |
| A_Term_Fee | -0.1870 | -0.9175* | -0.3144* | -0.2046 | -1.0658* | -0.3101* |
| | (0.1994) | (0.5485) | (0.1843) | (0.2033) | (0.6284) | (0.1878) |
| T_MVTBV | -0.0212 | -0.0282 | -0.0211* | -0.0213 | -0.0301 | -0.0221* |
| | (0.0144) | (0.0224) | (0.0123) | (0.0143) | (0.0245) | (0.0124) |
| A_Mrkt_Ret | 1.1049 | 0.5464 | 1.0183 | -0.0432 | 1.3520 | 0.0758 |
| | (0.6948) | (2.5199) | (0.6679) | (0.8796) | (2.401) | (0.8504) |
| *Constant* | -0.7272 | 0.5701 | -0.5091 | -0.6422 | 1.3862 | -0.4069 |
| | (0.5996) | (1.3107) | (0.5333) | (0.9073) | (2.1393) | (0.8510) |
| *Pseudo R²* | 0.3065 | 0.2210 | 0.2936 | 0.3304 | 0.2828 | 0.3162 |
| *Nr. of observ.* | 2756 | 242 | 2998 | 2756 | 232 | 2998 |
| *Fixed Effects* | | None | | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

This difference in results could relate to the fact that the authors mentioned use a different index (CRSP Index) for calculating market return compared to the indices used in this paper. Furthermore, *Bid Premium* shows an insignificant result in the multivariate model. However, this is consistent with recent literature of Mitchell & Pulvino (2001) who found similar insignificant results.

The variables *Attitude, Relative Size, Duration, T_Term_Fee* and *A_Term_Fee* all show a significant relation with deal success that is consistent with previous research as mentioned in the theoretical section of this paper. However, previous research did not find significant results between the variable *Industry Fit* and deal success. Since the SDC Database provides different categories of industry classifications, this paper tested all three of them in a simple univariate model and found the macro industry codes to have the highest significant relation with deal success as can be observed in Appendix B. As can be observed in the multivariate model (Table 7), *Industry Fit* shows a positive significant relation for the total sample. Intuitively, this can be explained as follows. Since *Industry Fit* is a dummy variable, a one unit increase means a shift from zero to one that represents a shift from no industry fit to an industry fit with respect to macro industry codes.

Furthermore, the control variables that were added for experimentation purposes, *T_MVTBV* and *Deal Value*, also show a significant result to some extent for the total sample. Since the relation between *T_MVTBV* and deal success is negative, this could be an indication that a higher potential value of the target firm leads to a rougher negotiation process and therefore a lower rate of deal success. Also, the relation between *Deal Value* and deal success is significantly positive which is in line with the previous mentioned intuition.

The main findings with respect to the relation between *MS0* and *Deal Success* are as follows. Results are significant for the inter-US sample but not for the foreign sample. Therefore, the predictive power of the merger spread on deal success only holds for domestic US deals. The first hypothesis in this paper '*Merger spread has a significant negative influence on the deal success rate*' can't be accepted nor can it be rejected due to this partial significance.

## 5.2 Cultural Fit and Deal Success

Similar to merger spread, initial results of the univariate regression model for cultural differences are shown. As can be observed in Table 8, this section provides the results with respect to the *Total Cult. Fit* variable which represents an absolute total of all six dimensional difference scores (the difference between US scores and the relevant scores of the country where the target firm is located). With respect to the foreign sample, the univariate model was insignificant. However, the total sample shows a significant negative relation between *Total Cult. Fit* and deal success. This is an indication of the fact that in case the difference in total cultural score between the target and acquiring firm increase by one unit, a 0.0144 unit decrease in log-odds of deal success occurs. Intuitively, this means the higher the total cultural difference between the target and the acquiring firm, the lower the rate of deal success.

*Table 8*

| Total Cult. Fit | Foreign* | Total | Foreign* | Total |
|---|---|---|---|---|
| Total Cult. Fit | -0.0046 | -0.0136*** | -0.0043 | -0.0144*** |
|  | (0.0053) | (0.0026) | (0.0056) | (0.0028) |
| *Constant* | 1.3178*** | 1.9273*** | 1.5613 | 0.3483 |
|  | (0.3083) | (0.0560) | (1.1532) | (0.3771) |
| *Pseudo $R^2$* | 0.0027 | 0.0096 | 0.0303 | 0.0457 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*
*\* Results for this sample shows evidence of an insignificant model as a whole due to a prob > chi squared, greater than 0.05.*

With respect to the multivariate regression model, the control variables remain the same as in Table 7, since the dependent variable, deal success, also remains the same. However, since significant results were found with respect to the merger spread *MS0* variable, this variable is also added as a control variable. Results of the multivariate regression model with respect to *Total Cult. Fit* and deal success can be found in Table 9. This shows a significant negative result for both the total sample (log-odds ratio of -0.0063) as well as the foreign sample (log-odds ratio of -0.0105) when year fixed effects are excluded. Respective odds ratios can be calculated to be 0.9937 and 0.9896.

These numbers can be interpreted as follows: a one unit increase in *Total Cult. Fit* would result in a 0.9937 unit decrease in the odds of deal success in the total sample and 0.9896 unit decrease in the odds of deal success for the foreign sample, ceteris paribus excluding year fixed effects.

*Table 9*

| Total Cult. Fit | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Total Cult. Fit | -0.0105* | -0.0063* | -0.0101 | -0.0062 |
| | (0.0062) | (0.0037) | (0.0066) | (0.0039) |
| MS0 | -0.7188 | -0.9364*** | -1.0785 | -0.9371*** |
| | (0.7443) | (0.2838) | (0.8798) | (0.2863) |
| Cash Only | -0.3302 | 0.2190 | -0.5634 | 0.2249 |
| | (0.5555) | (0.2131) | (0.5904) | (0.2200) |
| Stock Only | -0.9398 | -0.0388 | -1.6350** | -0.1488 |
| | (0.5910) | (0.1867) | (0.6779) | (0.2027) |
| Deal Value | 0.2961 | 0.3648*** | 0.3592 | 0.4068*** |
| | (0.3009) | (0.1006) | (0.3548) | (0.1039) |
| Attitude | 3.1920*** | 3.3289*** | 3.9526*** | 3.3881*** |
| | (0.5395) | (0.2284) | (0.7364) | (0.2374) |
| Industry Fit | -0.8286** | 0.3113* | -0.6876 | 0.2814* |
| | (0.3992) | (0.1639) | (0.4320) | (0.1683) |
| Relative Size | -2.4570** | -3.3069*** | -3.0017*** | -3.2940*** |
| | (1.0958) | (0.3958) | (1.1449) | (0.4021) |
| Bid Premium | 0.2716 | -0.1606 | 0.3704 | -0.1498 |
| | (0.6539) | (0.2442) | (0.7653) | (0.2445) |
| Duration | 0.0035 | 0.0032** | 0.0035 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0029) | (0.0014) |
| T_Term_Fee | 0.2015 | 1.1199*** | 0.0345 | 1.1797*** |
| | (0.5696) | (0.1608) | (0.5687) | (0.1713) |
| A_Term_Fee | -0.9293* | -0.2948 | -1.0824* | -0.2902 |
| | (0.5514) | (0.1836) | (0.6505) | (0.1875) |
| T_MVTBV | -0.0262 | -0.0192 | -0.0283 | -0.0202 |
| | (0.0228) | (0.0127) | (0.0255) | (0.0126) |
| A_Mrkt_Ret | 0.3606 | 0.9731 | 1.3496 | 0.0822 |
| | (2.5983) | (0.6723) | (2.4036) | (0.8495) |
| *Constant* | 0.9219 | -0.4626 | 1.3512 | -0.4034 |
| | (1.3087) | (0.5375) | (2.150) | (0.8485) |
| *Pseudo R²* | 0.2293 | 0.2949 | 0.2894 | 0.3174 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

When including year fixed effects, the *Total Cult. Fit* becomes slightly insignificant at a 10% significance level with respective p-values of 0.128 for the foreign sample and 0.118 for the total sample.

Besides the total cultural fit, this paper also investigated the relation between each separate cultural dimension and the level of deal success. Interestingly, some of them showed a significant impact while others remained insignificant. The cultural dimensions, Masculinity and Individualism showed a significant negative impact on deal success for the total sample both with and without year fixed effects. The regression tables regarding each separate cultural dimension can be found in Appendix E

The main findings with respect to the relation between *Total Cult. Fit* and deal success are as follows. The results show a significant relation for both the total sample as well as the foreign sample. Therefore, cultural differences reduce the chance of deal success. The second hypothesis in this paper '*Cultural differences between target and acquirer have a significant negative influence on the deal success rate*' can be accepted. However, the results become slightly insignificant when year fixed effects are added.

### 5.3 Additional Interaction Term

An interaction term consisting of *Total Cult. Fit* and *MS0* can be added to the total model to see if the cultural difference affects the predictive powers of the merger spread regarding the deal success rate. This interaction term of *Total Cult. Fit\*MS0* has been added to the regression model in Table 10. As can be observed in this table, the interaction term *Total Cult. Fit\*MS0* has no significant impact on deal success. However, by adding *Total Cult. Fit\*MS0*, the variable *MS0* becomes significant for the foreign model, when including year fixed effects. Furthermore, *Total Cult. Fit* becomes significant for the year fixed effects model.

*Table 10*

| Interaction term Total Cult. Fit * MS0 | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Total Cult. Fit | -0.0145** | -0.0082** | -0.0171** | -0.0076* |
| | (0.0070) | (0.0041) | (0.0072) | (0.0045) |
| MS0 | -1.8861 | -1.0257*** | -3.1732** | -1.0034*** |
| | (1.2881) | (0.2940) | (1.4733) | (0.3019) |
| *Total Cult. Fit*MS0* | 0.0276 | 0.0115 | 0.0479 | 0.0088 |
| | (0.0270) | (0.0144) | (0.0300) | (0.0175) |
| Cash Only | -0.2859 | 0.2204 | -0.5079 | 0.2240 |
| | (0.5751) | (0.2139) | (0.6210) | (0.2207) |
| Stock Only | -0.8873 | -0.0361 | -1.6079** | -0.1495 |
| | (0.5883) | (0.1868) | (0.6937) | (0.2033) |
| Deal Value | 0.3031 | 0.3609*** | 0.3701 | 0.4035*** |
| | (0.2949) | (0.1003) | (0.3392) | (0.1040) |
| Attitude | 3.2270*** | 3.3240*** | 4.0298*** | 3.3825*** |
| | (0.5376) | (0.2285) | (0.7326) | (0.2377) |
| Industry Fit | -0.8301** | 0.3098* | -0.6569 | 0.2800* |
| | (0.4020) | (0.1641) | (0.4394) | (0.1684) |
| Relative Size | -2.5077** | -3.3143*** | -3.1088*** | -3.2999*** |
| | (1.0989) | (0.3927) | (1.1284) | (0.3989) |
| Bid Premium | 0.2153 | -0.1535 | 0.2922 | -0.1443 |
| | (0.6238) | (0.2441) | (0.7241) | (0.2450) |
| Duration | 0.0032 | 0.0031** | 0.0028 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0029) | (0.0013) |
| T_Term_Fee | 0.1981 | 1.1177*** | 0.0417 | 1.1787*** |
| | (0.5799) | (0.1612) | (0.5839) | (0.1717) |
| A_Term_Fee | -0.8754 | -0.2901 | -0.9370 | -0.2860 |
| | (0.5864) | (0.1838) | (0.6662) | (0.1874) |
| T_MVTBV | -0.0302 | -0.0199 | -0.0353 | -0.0206* |
| | (0.0218) | (0.0122) | (0.0241) | (0.0122) |
| A_Mrkt_Ret | 0.8167 | 0.9814 | 2.0467 | -0.0896 |
| | (2.5587) | (0.6671) | (2.3728) | (0.8466) |
| *Constant* | 1.0838 | -0.4213 | 2.0754 | -0.3785 |
| | (1.2863) | (0.5347) | (2.1033) | (0.8452) |
| *Pseudo R²* | 0.2332 | 0.2953 | 0.2996 | 0.3176 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

## 6 Conclusion

While there has been some research on the topic of merger spread and deal success, on an international level findings remain limited. This research tries to broaden the horizon regarding this topic by also including global deals. However, it remains challenging to obtain a complete picture regarding the data especially for foreign transactions due to missing control variable data. Information with respect to US deals is extensive. This research found a significant relation between merger spread and deal success for the inter-US sample. An increase in merger spread leads to a decrease in deal success rate just as the first hypothesis states. When investigating the same relation for the foreign deal sample only, results became insignificant as was discussed in the results section of this paper. Also, results showed that the merger spread one day after the announcement date have a larger influence on deal success compared to the merger spread on the day of the announcement date.

Furthermore, this paper tried to add a new dimension that is not much investigated in the relevant research community namely the cultural aspect in the deal process. Even though there has been significant research on the post-transaction performance of merged firms, similar research with respect to the deal process and success rate is still missing. Therefore, this paper tried to investigate if there is indeed a relation between cultural differences between the acquiring and target company and the deal success rate. Assumed was that significant cultural differences lead to friction between both parties and could negatively affect the deal success. Results regarding this matter indicate that indeed such a relation exists. For both the total as well as the foreign deal samples, results showed a significant negative relation between the variable that represents the total cultural difference and deal success indicating that higher cultural differences reduce the chance of a successful deal. However, this was only the case if year fixed effects were excluded. Besides the total cultural difference, it is interesting to note that some cultural dimensions have a far larger impact on deal success than other dimensions. For example, the dimensions masculinity and individualism showed a significant impact when they were added solely to the regression while others did not show the same results. This could be evidence of a higher level of importance regarding cultural differences of these kinds for some dimensions compared to others

## 7 Limitations

It is important to note that this research also has several limitations. In trying to achieve a greater sample size (especially for the foreign sample), two databases were merged as mentioned in the data description section of this paper. In doing so, a linking tool had to be used which caused some errors to arise. These errors were mostly corrected for by winsorising the data but it could still be possible that some errors in the data remain due to this linking process. However, if this linking process had not taken place, a significant amount of data on the control variables would not have been available, causing a far greater bias to the data.

Furthermore, when trying to come up with a complete picture, ideally one should not imply limitations on the sampling method of the data. This paper only focusses on deals that are financed with cash, common equity or a combination between both. However, other ways of financing exist such as asset deals or other hybrid structures. A stepping stone for future research would be to come up with ways to include these types of deals by correcting for side effects with respect to deal success in case of these more complicated way of financing. With further respect to the dataset used, as can be observed in the results section, there is a significant difference in sample sizes between the inter-US sample and the foreign sample. This could cause a bias to some extent when comparing both results.

Also, with respect to the cultural part of this research some limitation arise. This paper only looks at the culture score that has been assigned on a country level. As mentioned before, the cultural model used in this paper was constructed in several steps by different researchers. Therefore, the possibility that one dimension weighs far more than another dimension with respect to its influence on deal success exists. Furthermore, when looking at a country specific culture, it is not necessarily the case that this country specific culture is reflected entirely in the target or acquiring firm. For instance, there are Dutch firms that are headquartered in China, but these firms will also be strongly characterized by Dutch cultural opinions. The same goes for its employees.

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# Appendix A: Example differences of separate cultural dimensions

*Table A1: Example differences between small and large power distance cultures*

| Small Power Distance | Large Power Distance |
|---|---|
| Hierarchy means inequality of roles established for convenience | Hierarchy means existential inequality |
| Subordinates expect to be consulted | Subordinates expect to be told what to do |
| Pluralist governments based on majority vote and changed peacefully | Autocratic governments based on co-optation and changed by revolution |
| Corruption rare; scandals end political careers | Corruption frequent; scandals are covered up |
| Income distribution in society rather even | Income distribution in society very uneven |

*Source: Hofstede, 2011*

*Table A2: Example differences between individualistic and collectivistic cultures*

| Individualism | Collectivism |
|---|---|
| "I" – consciousness | "We" –consciousness |
| Right of privacy | Stress on belonging |
| Speaking one's mind is healthy | Harmony should always be maintained |
| Personal opinion expected: one person one vote | Opinions and votes predetermined by in-group |
| Task prevails over relationship | Relationship prevails over task |

*Source: Hofstede, 2011*

*Table A3: Example differences between weak and strong uncertainty avoidance cultures*

| Weak Uncertainty Avoidance | Strong Uncertainty Avoidance |
|---|---|
| Ease, lower stress, self-control, low anxiety | Higher stress, emotionality, anxiety, neuroticism |
| Higher scores on subjective health and wellbeing | Lower scores on subjective health and well-being |
| Tolerance of deviant persons and ideas: what is different is curious | Intolerance of deviant persons and ideas: what is different is dangerous |
| Comfortable with ambiguity and chaos | Need for clarity and structure |
| Dislike of rules - written or unwritten | Emotional need for rules – even if not obeyed |

*Source: Hofstede, 2011*

*Table A4: Example differences between masculine and feminine cultures*

| Femininity | Masculinity |
|---|---|
| Minimum emotional and social role differentiation between the genders | Maximum emotional and social role differentiation between the genders |
| Men and women should be modest and caring | Men should be and women may be assertive and ambitious |
| Balance between family and work | Work prevails over family |
| Sympathy for the weak | Admiration for the strong |
| Many women in elected political positions | Few women in elected political positions |

*Source: Hofstede, 2011*


*Table A5: Example differences between short-term and long-term orientated cultures*

| Short-Term Orientation | Long-Term Orientation |
|---|---|
| Personal steadiness and stability: a good person is always the same | A good person adapts to the circumstances |
| Traditions are sacrosanct | Traditions are adaptable to changed circumstances |
| Service to others is an important goal | Thrift and perseverance are important goals |
| Social spending and consumption | Large savings quote, funds available for investment |
| Slow or no economic growth of poor countries | Fast economic growth of countries up till a level of prosperity |

*Source: Hofstede, 2011*


*Table A6: Example differences between indulgent and restrained cultures*

| Indulgence | Restrained |
|---|---|
| Higher percentage of people declaring themselves very happy | Fewer very happy people |
| A perception of personal life control | A perception of helplessness: what happens to me is not my own doing |
| Freedom of speech seen as important | Freedom of speech is not a primary concern |
| Higher importance of leisure | Lower importance of leisure |
| More likely to remember positive emotions | Less likely to remember positive emotions |

*Source: Hofstede, 2011*

**Appendix B: Univariate regression models with mid industry, macro industry and SIC codes**

| *MS0* | Total | *MS0* | Total | *MS0* | Total |
|---|---|---|---|---|---|
| Merger Spread | -0.7682*** | Merger Spread | -0.7666*** | Merger Spread | -0.7636*** |
| | (0.1798) | | (0.1800) | | (0.1804) |
| Industry Fit: SICFit | 0.0070 | Industry Fit: MidFit | 0.0367 | Industry Fit: MacroFit | 0.2694** |
| | (0.1111) | | (0.1090) | | (0.1278) |
| *Constant* | 1.9964*** | *Constant* | 1.9770*** | *Constant* | 1.7862*** |
| | (0.0768) | | (0.0925) | | (0.1187) |
| *Pseudo $R^2$* | 0.0069 | *Pseudo $R^2$* | 0.0070 | *Pseudo $R^2$* | 0.0088 |
| *Nr. of observ.* | 2998 | *Nr. of observ.* | 2998 | *Nr. of observ.* | 2998 |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

## Appendix C: Control variables explained

| | |
|---|---|
| **Cash Only** | Dummy variable representing 1 if a deal is financed by cash only and 0 if any other way of financing applies |
| **Stock Only** | Dummy variable representing 1 if a deal is financed by common stock only and 0 if any other way of financing applies |
| **Deal Value** | Natural logarithm of the deal value in millions of USD |
| **Attitude** | Dummy variable; Attitude of the deal as classified by the SDC Database representing 1 if the deal is friendly and 0 otherwise |
| **Industry Fit** | Dummy variable; Industry fit as classified by the SDC Database (Macro industry codes) representing 1 if the code of the target is the same as the code of the acquirer and 0 otherwise |
| **Relative Size** | Natural logarithm of the target market value 20 trading days before the announcement date divided by the natural logarithm of the acquirer market value 20 trading days before the announcement date |
| **Bid Premium** | Initial offer price minus target share price one week before the announcement date, divided by the target share price one week before the announcement date |
| **Duration** | Duration in days between the announcement date and either the closing date or the failure announcement date |
| **T_Term_Fee** | Dummy variable; if a target termination fee clause is present during the deal process, this variable equals 1; if no such clause is present, the variable equals 0 |
| **A_Term_Fee** | Dummy variable; if a acquirer termination fee clause is present during the deal process, this variable equals 1; if no such clause is present, the variable equals 0 |
| **T_MVTBV** | Target market value divided by the target's book value 20 trading days before the announcement date |
| **A_Mrkt_Ret** | Cumulative return of the index where the acquirer is listed over a period of 120 trading days before the announcement date |

# Appendix D: Multivariate regression model with MS1 as merger spread

| MS1 | Inter-US | Foreign | Total | Inter-US | Foreign | Total |
|---|---|---|---|---|---|---|
| Merger Spread | -1.2221*** | -0.3708 | -1.1271*** | -1.2883*** | -1.1662 | -1.2625*** |
| | (0.4068) | (0.9196) | (0.3658) | (0.4010) | (1.1268) | (0.3617) |
| Cash Only | 0.2385 | -0.3600 | 0.1746 | 0.2158 | -0.7630 | 0.1679 |
| | (0.2369) | (0.5691) | (0.2158) | (0.2474) | (0.6072) | (0.2230) |
| Stock Only | 0.0998 | -0.9726 | 0.0106 | -0.0184 | -1.7369** | -0.1203 |
| | (0.2035) | (0.6044) | (0.1856) | (0.2224) | (0.6812) | (0.2017) |
| Deal Value | 0.3848*** | 0.2030 | 0.3674*** | 0.4420*** | 0.2525 | 0.4144*** |
| | (0.1112) | (0.2958) | (0.1009) | (0.1158) | (0.3351) | (0.1044) |
| Attitude | 3.4377*** | 3.0162*** | 3.3178*** | 3.5217*** | 3.7853*** | 3.3767*** |
| | (0.2601) | (0.5282) | (0.2265) | (0.2681) | (0.7219) | (0.2330) |
| Industry Fit | 0.5065*** | -0.6993* | 0.3168** | 0.4394** | -0.6143 | 0.2845* |
| | (0.1750) | (0.4038) | (0.1609) | (0.1822) | (0.4474) | (0.1661) |
| Relative Size | -3.2468*** | -2.4034** | -3.1589*** | -3.1645*** | -2.9051*** | -3.1089*** |
| | (0.4245) | (1.0659) | (0.3941) | (0.4308) | (1.1024) | (0.4028) |
| Bid Premium | -0.2774 | 0.0813 | -0.2275 | -0.2419 | 0.2750 | -0.1812 |
| | (0.2718) | (0.6453) | (0.2490) | (0.2660) | (0.7328) | (0.2462) |
| Duration | 0.0030** | 0.0031 | 0.0032** | 0.0030** | 0.0032 | 0.0032** |
| | (0.0015) | (0.0032) | (0.0013) | (0.0015) | (0.0028) | (0.0014) |
| T_Term_Fee | 1.1701*** | 0.3593 | 1.1564*** | 1.2537*** | 0.1870 | 1.2319*** |
| | (0.1672) | (0.5374) | (0.1522) | (0.1805) | (0.5517) | (0.1613) |
| A_Term_Fee | -0.1640 | -0.8958 | -0.2939 | -0.1834 | -1.0245 | -0.2317 |
| | (0.1983) | (0.5521) | (0.1841) | (0.2020) | (0.6326) | (0.1873) |
| T_MVTBV | -0.0200 | -0.0277 | -0.0195 | -0.0202 | -0.0274 | -0.0207 |
| | (0.0147) | (0.0225) | (0.0127) | (0.0146) | (0.0249) | (-0.0128) |
| A_Mrkt_Ret | 1.0820 | 0.4149 | 0.9823 | -0.1284 | 0.9360 | -0.0489 |
| | (0.7004) | (2.4947) | (0.6733) | (0.8814) | (2.3320) | (0.8465) |
| Constant | -0.9008 | 0.6713 | -0.6659 | -0.8165 | 1.5624 | -0.5723 |
| | (0.5974) | (1.3264) | (0.5341) | (0.9130) | (2.1222) | (0.8605) |
| Pseudo $R^2$ | 0.3075 | 0.2176 | 0.2937 | 0.3325 | 0.2800 | 0.3174 |
| Nr. of observ. | 2756 | 242 | 2998 | 2756 | 232 | 2998 |
| Fixed Effects | | None | | | Year | |

Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. *** is significant at a 1% level, ** at a 5% level and * at a 10% level.

# Appendix E1: Multivariate regression model with Power Distance variable

| Power Distance | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Power Distance | -0.0727 | -0.0571 | -0.0781 | -0.0600 |
| | (0.0691) | (0.0448) | (0.0812) | (0.0476) |
| MS0 | -0.7625 | -0.9344*** | -1.1389 | -0.9352*** |
| | (0.7321) | (0.2833) | (0.8732) | (0.2860) |
| Cash Only | -0.3630 | 0.2139 | -0.6535 | 0.2199 |
| | (0.5743) | (0.2132) | (0.6155) | (0.2201) |
| Stock Only | -0.9690 | -0.0317 | -1.7357** | -0.1491 |
| | (0.6005) | (0.1864) | (0.7060) | (0.2030) |
| Deal Value | 0.2829 | 0.3620*** | 0.3477 | 0.4054*** |
| | (0.2996) | (0.1007) | (0.3633) | (0.1041) |
| Attitude | 3.1299*** | 3.3166*** | 3.911*** | 3.3770*** |
| | (0.5493) | (0.2287) | (0.7567) | (0.2372) |
| Industry Fit | -0.7800** | 0.3166* | -0.6295 | 0.2835* |
| | (0.3985) | (0.1635) | (0.4378) | (0.1685) |
| Relative Size | -2.4575** | -3.3073*** | -2.9595*** | -3.2921*** |
| | (1.0871) | (0.3950) | (1.1309) | (0.4019) |
| Bid Premium | 0.2454 | -0.1702 | 0.3562 | -0.1586 |
| | (0.6620) | (0.2435) | (0.7832) | (0.2446) |
| Duration | 0.0032 | 0.0032** | 0.0033 | 0.0031** |
| | (0.0032) | (0.0013) | (0.0030) | (0.0014) |
| T_Term_Fee | 0.2489 | 1.1371*** | 0.0524 | 1.1970*** |
| | (0.5797) | (0.1615) | (0.5943) | (0.1714) |
| A_Term_Fee | -0.9297* | -0.2994 | -1.0882* | -0.2950 |
| | (0.5577) | (0.1842) | (0.6523) | (0.1880) |
| T_MVTBV | -0.0259 | -0.0196 | -0.0291 | -0.0205 |
| | (0.0226) | (0.0126) | (0.0249) | (0.0126) |
| A_Mrkt_Ret | 0.3768 | 0.99737 | 1.2683 | 0.0702 |
| | (2.6092) | (0.6720) | (2.4263) | (0.8513) |
| *Constant* | 0.7901 | -0.4648 | 1.2940 | -0.3937 |
| | (1.3617) | (0.5394) | (2.2210) | (0.8496) |
| *Pseudo R²* | 0.2250 | 0.2944 | 0.2863 | 0.3170 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

# Appendix E2: Separate multivariate regression model with Individualism variable

| Individualism | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Individualism | -0.0318 | -0.0342** | -0.0276 | -0.0323* |
| | (0.0258) | (0.0174) | (0.0273) | (0.0186) |
| MS0 | -0.6382 | -0.9140*** | -1.0747 | -0.9194*** |
| | (0.7772) | (0.2855) | (0.8858) | (0.2877) |
| Cash Only | -0.4016 | 0.2108 | -0.6681 | 0.2184 |
| | (0.5843) | (0.2140) | (0.6005) | (0.2206) |
| Stock Only | -0.9839 | -0.0428 | -1.6569** | -0.1440 |
| | (0.6114) | (0.1871) | (0.6774) | (0.2025) |
| Deal Value | 0.2398 | 0.3652*** | 0.2709 | 0.4042*** |
| | (0.2957) | (0.1012) | (0.3342) | (0.1040) |
| Attitude | 3.1516*** | 3.3375*** | 3.9173*** | 3.3958** |
| | (0.5340) | (0.2286) | (0.7288) | (0.2367) |
| Industry Fit | -0.7595* | 0.3160* | -0.6766 | 0.2871* |
| | (0.3955) | (0.1627) | (0.4373) | (0.1670) |
| Relative Size | -2.3818** | -3.2926*** | -2.9171** | -3.2791*** |
| | (1.0743) | (0.3957) | (1.1016) | (0.4013) |
| Bid Premium | 0.2876 | -0.1629 | 0.3972 | -0.1502 |
| | (0.6554) | (0.2446) | (0.7495) | (0.2448) |
| Duration | 0.0035 | 0.0032** | 0.0034 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0028) | (0.0014) |
| T_Term_Fee | 0.3461 | 1.1253*** | 0.1432 | 1.1850*** |
| | (0.5441) | (0.1589) | (0.5506) | (0.1700) |
| A_Term_Fee | -0.8740 | -0.2894 | -1.0319* | -0.2876 |
| | (0.5405) | (0.1840) | (0.6240) | (0.1877) |
| T_MVTBV | -0.0296 | -0.0198 | -0.0301 | -0.0209* |
| | (0.0225) | (0.0128) | (0.0252) | (0.0127) |
| A_Mrkt_Ret | 0.4418 | 0.9896 | 1.2491 | 0.0881 |
| | (2.5270) | (0.6719) | (2.3639) | (0.8474) |
| Constant | 0.7410 | -0.4926 | 1.4733 | -0.4223 |
| | (1.3100) | (0.5357) | (2.1161) | (0.8510) |
| Pseudo R$^2$ | 0.2260 | 0.2953 | 0.2861 | 0.3176 |
| Nr. of observ. | 242 | 2998 | 232 | 2998 |
| Fixed Effects | None | | Year | |

*Note: Results are shown of a logit regression with dealsuccess as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

# Appendix E3: Separate multivariate regression model with Masculinity variable

| Masculinity | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Masculinity | -0.0387 | -0.0570** | -0.0454 | -0.0489* |
|  | (0.0533) | (0.0259) | (0.0607) | (0.0274) |
| MS0 | -0.6721 | -0.9222*** | -1.1015 | -0.9273*** |
|  | (0.7590) | (0.2846) | (0.8606) | (0.2871) |
| Cash Only | -0.3421 | 0.2254 | -0.6518 | 0.2239 |
|  | (0.5777) | (0.2138) | (0.5939) | (0.2206) |
| Stock Only | -0.9181 | -0.0367 | -1.6183** | -0.1368 |
|  | (0.6012) | (0.1855) | (0.6865) | (0.2018) |
| Deal Value | 0.2153 | 0.3612*** | 0.2430 | 0.3990*** |
|  | (0.2898) | (0.1005) | (0.3270) | (0.1035) |
| Attitude | 3.0915*** | 3.3329*** | 3.8708*** | 3.3878*** |
|  | (0.5209) | (0.2280) | (0.7042) | (0.2363) |
| Industry Fit | -0.7139* | 0.3212** | -0.6494 | 0.2940* |
|  | (0.4055) | (0.1628) | (0.4527) | (0.1669) |
| Relative Size | -2.4328** | -3.3034*** | -3.0120*** | -3.2899*** |
|  | (1.077) | (0.3962) | (1.1113) | (0.4013) |
| Bid Premium | 0.2814 | -0.1577 | 0.3895 | -0.1467 |
|  | (0.6446) | (0.2437) | (0.7244) | (0.2441) |
| Duration | 0.0033 | 0.0031** | 0.0032 | 0.0031** |
|  | (0.0031) | (0.0013) | (0.0027) | (0.0013) |
| T_Term_Fee | 0.4303 | 1.1203*** | 0.2297 | 1.1825*** |
|  | (0.5431) | (0.1590) | (0.5543) | (0.1706) |
| A_Term_Fee | -0.8916 | -0.2849 | -1.0318* | -0.2854 |
|  | (0.5457) | (0.1844) | (0.6170) | (0.1880) |
| T_MVTBV | -0.0296 | -0.0198 | -0.0302 | -0.0207* |
|  | (0.0221) | (0.0125) | (0.0246) | (0.0125) |
| A_Mrkt_Ret | 0.6073 | 1.0094 | 1.3940 | 0.1033 |
|  | (2.4906) | (0.6703) | (2.3724) | (0.8454) |
| *Constant* | 0.7953 | -0.4622 | 1.7840 | -0.4026 |
|  | (1.2885) | (0.5340) | (2.1130) | (0.8479) |
| *Pseudo R²* | 0.2230 | 0.2956 | 0.2849 | 0.3176 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*

## Appendix E4: Separate multivariate regression model with Uncertainty Avoidance variable

| Uncertainty Avoidance | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Uncertainty Avoidance | -0.0108 | -0.0263 | -0.0119 | -0.0280 |
| | (0.0454) | (0.0288) | (0.0554) | (0.0304) |
| MS0 | -0.7387 | -0.9355*** | -1.1488 | -0.9366*** |
| | (0.7431) | (0.2840) | (0.8481) | (0.2870) |
| Cash Only | -0.3442 | 0.2131 | -0.6612 | 0.2173 |
| | (0.5736) | (0.2130) | (0.5996) | (0.2200) |
| Stock Only | -0.9451 | -0.0257 | -1.6958** | -0.1449 |
| | (0.6001) | (0.1862) | (0.7089) | (0.2030) |
| Deal Value | 0.2370 | 0.3581*** | 0.2848 | 0.4015*** |
| | (0.2923) | (0.1003) | (0.3421) | (0.1037) |
| Attitude | 3.0708*** | 3.3107*** | 3.8405*** | 3.3709*** |
| | (0.5367) | (0.2280) | (0.7299) | (0.2365) |
| Industry Fit | -0.7153* | 0.3251** | -0.5946 | 0.2924* |
| | (0.4074) | (0.1630) | (0.4491) | (0.1679) |
| Relative Size | -2.4461** | -3.3035*** | -2.9896*** | -3.2871*** |
| | (1.0787) | (0.3939) | (1.1146) | (0.4007) |
| Bid Premium | 0.2765 | -0.1658 | 0.3881 | -0.1536 |
| | (0.6513) | (0.2433) | (0.7432) | (0.2442) |
| Duration | 0.0031 | 0.0032** | 0.0032 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0028) | (0.0014) |
| T_Term_Fee | 0.3803 | 1.1529*** | 0.1842 | 1.2137*** |
| | (0.5667) | (0.1616) | (0.5773) | (0.1716) |
| A_Term_Fee | -0.9265* | -0.3043* | -1.0768* | -0.2992 |
| | (0.5538) | (0.1845) | (0.6338) | (0.1882) |
| T_MVTBV | -0.0274 | -0.0198 | -0.0295 | -0.0207* |
| | (0.0223) | (0.0125) | (0.0243) | (0.0125) |
| A_Mrkt_Ret | 0.5291 | 0.0912 | 1.3547 | 0.0741 |
| | (2.5383) | (0.6710) | (2.4038) | (0.8506) |
| Constant | 0.6202 | -0.4778 | 1.3806 | -0.3975 |
| | (1.3471) | (0.5376) | (2.1502) | (0.8489) |
| Pseudo R² | 0.2212 | 0.2940 | 0.0032 | 0.3167 |
| Nr. of observ. | 242 | 2998 | 0.2830 | 2998 |
| Fixed Effects | None | | Year | |

Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. *** is significant at a 1% level, ** at a 5% level and * at a 10% level.

## Appendix E5: Separate multivariate regression model with Long-Term Orientation variable

| Long-Term Orientation | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| LT Orientation | -0.0019 | -0.0136 | -0.0031 | -0.0129 |
| | (0.0225) | (0.0124) | (0.0240) | (0.0132) |
| MS0 | -0.7273 | -0.9340*** | -1.1431 | -0.938*** |
| | (0.7485) | (0.2842) | (0.8496) | (0.2874) |
| Cash Only | -0.3367 | 0.2196 | -0.6516 | 0.2211 |
| | (0.5678) | (0.2129) | (0.5859) | (0.2198) |
| Stock Only | -0.9327 | -0.0248 | -1.6725** | -0.1414 |
| | (0.6016) | (0.1856) | (0.6899) | (0.2024) |
| Deal Value | 0.2265 | 0.3572*** | 0.2724 | 0.3996*** |
| | (0.2915) | (0.1003) | (0.3314) | (0.1037) |
| Attitude | 3.0608*** | 3.3135*** | 3.8316*** | 3.3719*** |
| | (0.5304) | (0.2276) | (0.7189) | (0.2364) |
| Industry Fit | -0.7106* | 0.3239** | -0.6020 | 0.2931* |
| | (0.4071) | (0.1630) | (0.4492) | (0.1677) |
| Relative Size | -2.4403** | -3.3040*** | -2.9919*** | -3.2882*** |
| | (1.0745) | (0.3943) | (1.1101) | (0.4007) |
| Bid Premium | 0.2767 | -0.1612 | 0.3891 | -0.1506 |
| | (0.6526) | (0.2436) | (0.7392) | (0.2443) |
| Duration | 0.0032 | 0.0031** | 0.0032 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0028) | (0.0014) |
| T_Term_Fee | 0.4059 | 1.1472*** | -0.2074 | 1.2112*** |
| | (0.5537) | (0.1612) | (0.5507) | (0.1719) |
| A_Term_Fee | -0.9223* | -0.3035* | -1.0727* | -0.2985 |
| | (0.5562) | (0.1844) | (0.6309) | (0.1881) |
| T_MVTBV | -0.0279 | -0.0195 | -0.0296 | -0.0206* |
| | (0.0224) | (0.0125) | (0.0245) | (0.0125) |
| A_Mrkt_Ret | 0.5445 | 0.9927 | 1.3716 | 0.0830 |
| | (2.5239) | (0.6707) | (2.3857) | (0.8496) |
| Constant | 0.5902 | -0.4712 | 1.4012 | -0.3973 |
| | (1.3482) | (0.5366) | (2.1638) | (0.8481) |
| Pseudo R$^2$ | 0.2211 | 0.2942 | 0.2828 | 0.3167 |
| Nr. of observ. | 242 | 2998 | 232 | 2998 |
| Fixed Effects | None | | Year | |

Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. *** is significant at a 1% level, ** at a 5% level and * at a 10% level.

# Appendix E6: Separate multivariate regression model with Indulgence variable

| *Indulgence* | Foreign | Total | Foreign | Total |
|---|---|---|---|---|
| Indulgence | -0.0760 | -0.1119 | -0.0645 | -0.1125 |
| | (0.1496) | (0.1169) | (0.1696) | (0.1216) |
| MS0 | -0.7306 | -0.9266*** | -1.13337 | -0.9269*** |
| | (0.7410) | (0.2842) | (0.8662) | (0.2875) |
| Cash Only | -0.3487 | 0.2125 | -0.6583 | 0.2183 |
| | (0.5746) | (0.2129) | (0.6029) | (0.2199) |
| Stock Only | -0.9574 | -0.0234 | -1.6967** | -0.1404 |
| | (0.6060) | (0.1859) | (0.7017) | (0.2024) |
| Deal Value | 0.2325 | 0.3562*** | 0.2783 | 0.3990*** |
| | (0.2936) | (0.1005) | (0.3439) | (0.1040) |
| Attitude | 3.0629*** | 3.3029*** | 3.8359*** | 3.3615*** |
| | (0.5348) | (0.2280) | (0.7329) | (0.2357) |
| Industry Fit | -0.7369* | 0.3201** | -0.6129 | 0.2875* |
| | (0.3965) | (0.1633) | (0.4448) | (0.1684) |
| Relative Size | -2.4324** | -3.302*** | -2.9440*** | -3.2840*** |
| | (1.0731) | (0.3941) | (1.1080) | (0.4009) |
| Bid Premium | 0.2430 | -0.1782 | 0.3625 | -0.1659 |
| | (0.6656) | (0.2432) | (0.7641) | (0.2446) |
| Duration | 0.0032 | 0.0032** | 0.0033 | 0.0031** |
| | (0.0031) | (0.0013) | (0.0029) | (0.0014) |
| T_Term_Fee | 0.3755 | 1.1579*** | 0.1762 | 1.2217*** |
| | (0.5510) | (0.1598) | (0.5647) | (0.1692) |
| A_Term_Fee | -0.9242* | -0.3051* | -1.0701* | -0.3012 |
| | (0.5513) | (0.1840) | (0.6354) | (0.1876) |
| T_MVTBV | -0.0279 | -0.0202 | -0.0304 | -0.0213* |
| | (0.0225) | (0.0125) | (0.0248) | (0.0125) |
| A_Mrkt_Ret | 0.4504 | 0.9796 | 1.2814 | 0.0630 |
| | (2.5806) | (0.6715) | (2.4069) | (0.8509) |
| *Constant* | 0.6984 | -0.4656 | 1.3858 | -0.3866 |
| | (1.3798) | (0.5406) | (2.1735) | (0..8507) |
| *Pseudo $R^2$* | 0.2220 | 0.2941 | 0.2834 | 0.3167 |
| *Nr. of observ.* | 242 | 2998 | 232 | 2998 |
| *Fixed Effects* | None | | Year | |

*Note: Results are shown of a logit regression with deal success as its dependent variable. Robust standard errors are shown in the parenthesis. \*\*\* is significant at a 1% level, \*\* at a 5% level and \* at a 10% level.*