MSc Economics & Business
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The effect of the deal value and CEO compensation on the completion of M&A deals

Evidence for the US public market

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Abstract

This research examines what the effects of the deal value and CEO compensation are on the completion of the deal in mergers and acquisitions. This question is answered based on a research of 974 mergers and acquisitions from January 2011 until December 2018, where both the target and the acquirer are US public companies. Out of the deals 869 are completed and 105 are uncompleted. The results show that there is a negative effect between the deal value and the deal completion. It is also found that the CEO compensation positively affects the deal completion.

Keywords:
M&A; Event-study; CEO compensation; Deal completion; Binary response model

JEL Classification:
C12, C30, C35, G14, G34, J33, M12

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1. Introduction

During the last decades, a lot of research has been done for mergers and acquisitions. Most of this research is done on the abnormal announcement return and how this return can be explained by company and deal characteristics. Take for instance the research of Datta, Pinches and Narayanan (1992), they describe value or wealth creation in mergers and acquisition by looking at the abnormal announcement return of mergers and acquisitions. The abnormal announcement return is the return for shareholders of the bidding or target company in the days around the announcement of a deal. Datta et al. (1992) find that shareholders of both the bidding and target company lose when a deal is financed with company stock. Overall shareholders of target companies gain from mergers and acquisitions and the returns have increased over the past few years, the shareholders of acquiring companies lose. The findings of Datta et al. (1992) are confirmed by the research done by Moeller, Schlingemann and Stulz (2003) who also find that shareholders of acquiring companies lose when taking all deals into account. On the other hand, Alexandridis, Antypas and Travlos (2017) find that shareholders of acquiring firms can create value through mergers and acquisitions after 2009. What they also find is that deals using company stock as a method of payment do not destroy value anymore.

A topic within mergers and acquisitions which has had less attention is the deal completion and what company, chief executive officer (CEO), board and deal characteristics explain whether or not a deal is completed more often. We can think of a lot of things that can influence the completion of a deal, for instance, a CEO of a bidding company is probably driven to complete a deal because there is a compensation attached to it. A second thing one could think of is the deal value, the higher the value of a deal the more the bidding company wants to make a success out if it, this because the target firm is of great interest for the bidding firm. A CEO who is participating in a larger deal will most of the time also get a larger compensation and therefore would want to complete the deal more often.

This research aims to give a better understanding of the factors driving the completion of a deal within mergers and acquisitions. The CEO is one the most important people within a company, next to the board of directors, when doing a deal. Therefore, CEO compensation is probably one of the major factors in explaining the completion of a deal. The CEO compensation also is affected by the power the CEO has within the company as explained by Grinstein and Hribar (2004). Chikh and Filbien (2011) show that there is a relation between the abnormal announcement return and the completion of a deal, together with the relation to the power a CEO has. They show that CEOs of the acquiring company will have a larger chance on cancelling the deal when the abnormal announcement return is negative, the market does not react in favour of the deal. They also show that this is not the case for CEOs with more power. CEOs who have more power within the company are more likely to complete the deal, even though the

market has a negative reaction to the announcement. It thus seems that there is a positive relation between CEO power and the deal completion and there is a strong connection with CEO power and CEO compensation. This would suggest that there is a relation between CEO compensation and deal completion. This research will provide a deeper look into this CEO compensation, the relation to the value created when doing a deal and eventually the relation to the deal completion. Another important, if not the most important, factor in mergers and acquisitions is of course the deal value. This research takes a closer look into what factors drive this deal value and value creation and how these factors link to the CEO compensation as well. In the end, everything is put together in order to make a prediction on whether or not a deal is completed. This will give insights in how all the factors, such as company and deal characteristics, will influence this deal completion process and create a better understanding of it. The research question therefore is:

What is the relation between the deal value, CEO compensation and deal completion within mergers and acquisitions?

As already mentioned, deal value and value creation are popular topics within mergers and acquisition and even so is research on CEO compensation. Combining these topics and relating them to the completion of deals in mergers and acquisitions is what makes this an interesting research which will add value to the already existing literature. There is not much existing literature that combines these three things together and this is what makes it a unique research paper. Another contribution of this research is, that it makes use of the most recently available dataset which will shed new light on whether or not the findings in earlier researches still hold in this period of time. The research is built on economic theory and reasoning and is complemented with statistical tests to confirm or reject these theories. This will all lead to a clear understanding of the topic discussed in this research as well.

A research done by Grinstein and Hribar (2004) looks into CEO compensation. They found a positive relation between the CEO compensation and measures of effort and found that 39% of the acquiring firms gave their CEOs a compensation because the deal was completed. This thus means that the higher the compensation for a CEO the more effort he is willing to put in a deal. Logically this will result that a deal will be completed more often because of this extra effort. This is what we will examine in this research. In their paper Grinstein and Hribar (2004) also find that more powerful CEOs are more involved in deals of a higher value relative to the size of the business. CEOs that are more powerful receive higher compensation when doing deals. This implicitly says that CEOs with a higher compensation are often involved in deals of a higher value. This shows the relevance of this research, showing the relation between deal value, CEO compensation and deal completion.

In order to get an answer to the research question we first need to fully understand what drives deal value creation and what drives the CEO compensation. There are factors that indicate value creation for the shareholders of the target and the bidding firm. If a merger or acquisition creates more value for the shareholders, this will most likely be reflected in the deal value as well. Datta et al. (1992) describe factors that often drive the value created in mergers and acquisitions. These are for instance regulatory changes, the number of bidders, if the deal is financed with stocks or cash, the deal can be a tender offer or a merger as well as the merger or acquisition can be conglomerate and non-conglomerate. As regulatory changes they for instance describe the Williams Amendment which ensures a 10 trading day thinking time for the target company to evaluate the offer made. In the meantime this can then lead to an increase in the number of bidders, which increases the competition. This in turn can lead to a higher deal value. An increase in the number of bidders also has a negative effect on the created wealth for shareholders of the bidding company, but a positive effect on the creation of wealth for the shareholders of the target company. The deal can be financed with cash, stocks or both. Stock offers often take more time to complete, because approval of the SEC is needed. This will lead to an increase in the competitiveness of the deal process which target shareholders profit from. Stock offers are often received negatively, leading to a decrease in the stock price of the target company. The shareholders of the acquiring firm dislike stock offers. This is because it leads to more shares which are divided amongst more shareholders. As a result, the dividend that is pay-out by the company then has to be shared amongst more shareholders and this will lead to the dilution of the shares. Cash offers in their case result in higher premiums. Cash offers are more favoured than stock offers. The shareholders of a target firm benefit more from tender offers then from mergers. This is because a tender offer attracts other bidding companies, which results in more competition and thus a higher deal value. In tender offers, the shareholders of the target firm receive a premium which in case of a merger is received by the management of the target company. Lastly we look at the type of acquisition. Acquisitions of related firms create more wealth, because knowledge about the industry can be shifted within the companies. This can lead to a higher total firm value. Others say that unrelated mergers and acquisitions are more favourable because of diversification benefits (Datta et al., 1992).

Grinstein and Hribar (2004) find that measures for managerial power explain the variation in the value of the compensations. For instance when a CEO is also head of the board this will result in an increase of the compensation with 1.447 million dollars. They also find that market reactions to the deal announcement are negatively related to the compensation, as well as the premium paid for the target. Considering the premium paid for the target, it is often seen that the offer price per share is around the 52 week high price. The target firm uses this 52 week high price as a reference point for the company's performance. A deal will be completed more often if the price is around or exceeds this 52 week high price. It can be seen that the offer price is close to the 52 week high price in deals from different sizes.

This shows that the 52 week high price is widely used as the target offer price (Alexandridis, Fuller, Terhaar, & Travlos, 2013).

As mentioned by Grinstein and Hribar (2004) already, when a CEO has more power it is shown that this is more negatively received by the market and as a result such deals of high powered CEOs show a lower abnormal announcement return. Part of the variation in the compensation can be explained by measures of effort and skill, however, this is only a small part. Deal size can explain a larger part of the received compensation and managerial power can explain variation within the compensations. It thus can be said that CEOs with a larger power within their board will get a higher compensation, they often appear to be in deals of a higher value, but this results in a lower abnormal announcement return (Grinstein & Hribar, 2004). According to the research done by Duttaa, MacAulay and Saadi (2011), there is no significant relation between the power of the CEO and value destroying mergers and acquisitions. Meaning a deal is not received more negatively by the market if the CEO is more powerful compared to a deal done by a less powerful CEO. This is contrary to the findings of Grinstein and Hribar (2004), who did find a more negative market reaction when the deal is done by a more powerful CEO. Duttaa et al. (2011) do find that more powerful CEOs are involved in more deals. As a result it can be shown that powerful CEOs are the head of fast growing companies, meaning they are most often head of large companies and as a result receive a higher compensation. This shows a positive relation between the CEO power and the CEO compensation.

Looking at the research of Adams, Almeida and Ferreira (2005), it is shown that the power of the CEO influences the company returns as well. They look into different measures of CEO power. These are whether or not the CEO is the founder of the company, if the CEO is the only insider of the board and if the CEO also is head of the board of directors. Following their research it can be said that there is more variation in the returns of the company when the company has a CEO that is more powerful. This is the case for all three measures of CEO power, but especially the case when the current CEO is the founder of the firm. Grinstein and Hribar (2004) also mention some characteristics that can describe the power of a CEO. These are, for instance, whether or not the CEO is also head of the board, the number of board members and if they were previous employees or still are employees and if the CEO is a member of the committee which chooses the new members of the board. Often cash bonuses are used as a form of compensation. They describe several cases as a reason for the bonus to be paid out to the CEO. It is shown that when the deal is the only reason for the bonus to be paid, this results in a higher deal value than when the deal is one of the reasons for the bonus. A reasons for the variation in the bonuses is for instance the deal completion. If the completion of the deal is the only reason for the bonus, the compensation is higher than when the completion of the deal is one of the reasons for the bonus to be paid (Grinstein & Hribar, 2004).

In order to answer the research question, this research makes used of 974 mergers and acquisitions in the United States (US), extracted from the ThomsonOne database. Both the acquiring and the target company are US public companies. This research focusses on both completed and uncompleted deals. The sample consists out of 869 completed deals with an average deal value of $2.8 billion and the sample contains 105 uncompleted deals with an average deal value of $10.3 billion. There is a significant difference in the deal value of completed and uncompleted deals. Next to the deal value, other deal characteristics are taken out of the database, such as the method of payment. In order to see the value created when doing a deal, an event-study is performed to calculate the average cumulative abnormal announcement return for both the completed and uncompleted deals for the acquiring company. In order to do so, data about company stock prices and returns is retrieved out of the CRSP database. To see what characteristics influence the value created when doing the deal, multivariate regressions are performed with the cumulative abnormal announcement return as dependent variable. Next to the deal characteristics taken out of ThomsonOne, the regressions control for company and governmental characteristics. The company characteristics are taken out of Compustat. Company characteristics are found for 791 completed and 92 uncompleted deals. It is shown that the average market value of the acquiring companies is $17.7 billion for the completed and $22.4 billion for the uncompleted deals. The governmental characteristics, such as the CEO compensation, is taken out of the ExecuComp database. Data considering CEO and board characteristics is found for 480 completed and 58 uncompleted deals. The average CEO total compensation is equal to $9.5 million for completed and $8.3 million for uncompleted deals. Multivariate regressions are performed in order to see what deal, company and governmental characteristics influence the level of the CEO compensation. Lastly, this research performs nonlinear regressions with a binary dependent variable, using the logit and probit model. These models test what deal, company and governmental characteristics increase or decrease the probability that a deal is completed.

The results show that the deal value in mergers and acquisitions negatively affects the probability that a deal is completed. The same is found when looking at the price per share paid to the shareholders of the target company, by the acquiring company. On the other hand, a deal will be completed more often if the price per share paid to the shareholders of the target company is higher than the 52 week high price of the target company. The CEO compensation positively affects the deal completion process. A higher CEO compensation will result in a higher probability of completing the deal. These results answer the main research question of this paper. Smaller deals, with a price per share paid that is higher than the 52 week high price of the target and done by higher compensated CEOs will be completed more often. This research also shows that there is a negative abnormal announcement return when a deal is done by two US public companies and there is no significant difference between the abnormal announcement return of completed and uncompleted deals. The abnormal announcement return cannot explain the deal completion process, as well as it does not explain the height of the deal value. The power of the CEO,

measured through various governmental characteristics has a negative effect on the abnormal announcement return of the acquiring company. The opposite relation is found between the power of the CEO and the CEO compensation. An increase in the CEO power will result in an increase in the CEO compensation. It is shown that an increase in the tenure of the CEO will result in a higher CEO compensation and a CEO of a large company will receive a higher compensation as well. This research also shows that larger companies are often involved in larger deals. It is also shown that CEOs that are older will participate in larger deals as well. Lastly, it is shown that the deal value for completed deals is significantly lower than the deal value for uncompleted deals.

The remainder of this research is structured as follows: section 2 will give a description of relevant related literature on the different topics surrounding mergers and acquisitions, such as CEO compensation, value creation and factors that drive the CEO compensation and value creation when doing a deal. Section 3 will give a description of the dataset used for this research, as well as a description for the methodology used in order to answer the research question. Section 3 will also provide us with a description of the variables created in this research. Section 4 shows the results for the event-study and the regression analyses. In section 5 the research is concluded as well as some suggestion are made about the performance of future research on this topic.

2. Literature Review

This chapter is used to explain the main topics of this research using relevant related literature. In this chapter is shown what is meant by CEO compensation, what is it existing off. It is also shown what factors affect the height of the compensation, as well as how the CEO compensation relates to the completion in mergers and acquisitions. Another important part is the value creation through the abnormal announcement returns. It is described what is meant by the abnormal announcement return and who benefits from the deal. The relation between the abnormal announcement return and company or deal value creation and deal completion is described. The existing literature will be used in order to formulate testable hypotheses which will help to answer the research question. In the end of this chapter, the hypotheses for this research will be described.

2.1 CEO compensation

At first, the CEO compensation is looked into. CEO compensation is what is paid to a CEO at the end of the year. You can think of the normal salary a CEO gets, but often a CEO also receives a bonus for the delivered services. Were the salary of a CEO is pinned down in the CEOs contract, the value of the bonus can fluctuate due to certain events. The completion of an acquisition for instance can drive up the bonus of a CEO, leading to a higher compensation (Grinstein & Hribar, 2004; Yim, 2013). The existing literature describes three different measures for the CEO compensation. The compensation can be described by total compensation, cash compensation or just the salary. The cash compensation represents the fixed CEO salary plus the bonus. The total compensation is equal to the salary plus the bonus plus other types of compensations, such as stock options, performance plans, phantom stock and restricted stock (Bliss & Rosen, 2001; Brick, Palmon, & Wald, 2006; Core, Holthausen, & Larcker, 1999; Hallock, 1997).

The CEO compensation is often compared to the aggregate compensation of the board of directors, or to the aggregate payment of top-five executives. The CEO compensation is measured relative to these aggregate compensations. This is called the CEO pay slice. It can represent the power of the CEO as well. If the CEO pay slice is larger, it means that the CEO is more important to the company. A higher CEO pay slice means that the CEO receives a larger compensation compared to the other company executives (Bebchuk, Cremers, & Peyer, 2011; Zagonov & Salganik-Shoshan, 2018).

The existing literature shows different characteristics that affect the level of the CEO compensation. These characteristics are described separately in the following subsections.

2.1.1 Company characteristics

Looking at company characteristics, there are some factors that affect the level of the CEO compensation. One of these factors is the size of the company, which is a factor that does not ask for a lot of explanations. It is most often measured as the market capitalization a company has and represents the estimated market value of a company. The larger the firm, the more responsibilities a CEO has, the higher the compensation demand of the CEO is. There is a positive relation between the CEO compensation and the size of a firm, so larger firms pay their CEO a higher compensation (Bliss & Rosen, 2001; Core et al., 1999; Cyert, Kang, & Kumar, 2002; Duttaa et al., 2011; Grinstein & Hribar, 2004; Yim, 2013).

Another factor that can be looked upon is the return on assets (ROA). The ROA measures the profitability of a company relative to the value of its assets. It can be seen as an indicator for the management's efficiency in using the company's assets to generate profits. The board size has a negative relation to the return on assets, because a company is believed to be run less efficient when the board of directors is larger (Jensen, 1993; Yermack, 1996). When a company is run more efficiently, the ROA is expected to be larger and therefore would result in a higher compensation for the CEO. This, however, is not supported by existing literature. Earlier research shows that there is no significant relation between the ROA and the level of CEO compensation (Bliss & Rosen, 2001; Brick et al., 2006; Core et al., 1999; Grinstein & Hribar, 2004). The research done by Yim (2013), on the other hand, shows a negative relation between the ROA and the CEO compensation. The standard deviation of the ROA is often used as measure for risk. The riskier a company is the lower the CEO compensation (Core et al., 1999).

A company's stock returns can be seen as a measure of company performance. An increase in the stock price means a company is doing well. This increase in the stock price results in a positive return for the shareholders of the company. Core et al. (1999) show a positive relation between the stock return of a company and the level of CEO compensation. This is a relation that would have been expected. A better performing company often pays higher salaries than a company that is close to default. This positive relation is found by Grinstein and Hribar (2004) as well. Their result, however, was not significant. Cyert et al. (2002) and Yim (2013) did find a significant and positive relation between the stock return and the CEO compensation. Research done by Bliss and Rosen (2001) shows that a $1 million increase in equity for a bank, so an increase in the company's stock price, increases the CEO compensation by $952. Next to the standard deviation of the ROA, the standard deviation of the stock returns is also used as a measure of risk. According to the research of Core et al. (1999) there seems to be no significant relation between the standard deviation of the stock return and the CEO compensation. Cyert, Kang, Kumar and Shah (1997) show a positive relation between the company risk, measured by the standard deviation of the stock returns, and the CEO compensation. A positive relation between the stock price volatility and the level of compensation also is shown in the research done by Brick et al. (2006).

Another company characteristic that can describe the company status, considering the investment opportunities, is the market-to-book ratio. The market-to-book ratio can tell if a company's stock is a value or a growth stock, where a growth stock has more growth and thus investing opportunities than a value stock. Value stocks are stocks with a low price relative to accounting measures, such as earnings and dividends. These stocks also tend to have a high book-to-market ratio, which means a low market-to-book ratio. Growth stocks are the other way around. These are stocks with a high price relative to accounting measures and stocks with a low book-to-market or a high market-to-book ratio (Lakonishok, Shleifer, & Vishny, 1994). Stock with a high market-to-book value thus have more growth or investment opportunities and therefore they pay a higher CEO compensation. This thus means that CEOs of faster growing companies receive more compensation. There is a positive relation between the market-to-book ratio and the CEO compensation (Yim, 2013).

2.1.2 Board characteristics

The board of a company or also called the board of directors are supervisors to the company. They indirectly supervise the CEO. One of the responsibilities is to make sure that everything within the company runs smoothly. Another major task of the board of directors is appointing a CEO to the company, so they would want to make sure that the CEO does a good job. The board of directors is also responsible for the determination of the executive compensation. This means that if the CEO has a larger managerial power, or larger influence, on the board of directors, this could result in a larger CEO compensation. Managerial power, as defined by Finkelstein (1992), is the capacity of an individual to impose their will. Finkelstein (1992) describes four types of power an executive can have: structural power, ownership power, expert power and prestige power. Structural power is often the most for the CEO. This is due to the CEOs position in the firm, the highest rank, resulting in the most hierarchical power and influence over all the employees within the firm. One of the factors used to describe the structural power of a CEO is the compensation factor. The compensation factor is measured as the total cash compensation relative to the compensation of the best paid manager, other than the CEO, in the firm. As already said, this means that a higher managerial power goes hand in hand with a higher CEO compensation. Another measure for executive power described by Finkelstein (1992) is the percentage of company shares owned by the CEO or its relatives. The more percentage of the company shares a CEO holds, the more power the CEO has. This and other factors influencing the CEO power and compensation are described in the subsections of this chapter.

A board of directors can have all different forms, which all affect the CEO compensation differently. For instance there can be inside and outside directors. An inside director means that the director also is an employee of the company, it is often seen that the CEO of a company also is the chairman of the board. When the CEO also is the chairman of the board of directors, a higher compensation is received

due to the fact that the CEO has more managerial power (Brick et al., 2006; Grinstein & Hribar, 2004). Core et al. (1999) show that the CEO receives an extra compensation of $152,577 if this indeed is the case. As chairman of the board one needs to make decisions about hiring and firing the CEO. If the CEO thus also is chairman of the board one will only act on their personal interest. This will lead to an ineffective board of directors, because we can see some sort of conflict of interest. It is better to have an independent chairman (Jensen, 1993). An outside director means that a member of the board of directors is not employed by the company. These outside directors have no real connection to the company and thus are independent. Often, some members of the board are outside directors. This is because they bring experience not gained within the company. This can result in a wider view for the board and help solve problems by looking into it from another angle. A research done by Hallock (1997) looks into these outside directors. He finds that when outside directors who are CEOs of other companies, but serve on each other's board of directors, this will result in a higher level of compensation. The firms are so called interlocked. The CEO compensation for CEO interlocked firms is found to be 46 to 52% higher than the CEO compensation for other firms.

Another board characteristic which can be very different for all the board of directors is the size of the board. The size can vary a lot, some boards consist out of six members, but there can also be boards consisting out of fifteen or more members. Research is done on the effect of the board size on the CEO compensation. It is found that boards of smaller sizes are more effective and are less easy to control by the CEO (Jensen, 1993). In larger boards it more difficult to make decisions, because there are more members who have thoughts about what should be done. It is also more difficult to communicate when the board size increases. The same is found by Yermack (1996), he finds that there is a negative relation between the company value and the size of the board of directors. Meaning that smaller boards operate more effectively. As a reaction to this result, it is shown that companies with smaller board sizes pay a higher compensation to the CEO. The same is found in the research by Grinstein and Hribar (2004), where they also show a negative relation between the board size and the CEO compensation. A smaller board size thus leads to a higher CEO compensation and a reason for this is that they operate more effectively. However, a larger board of directors is more easily controlled by a CEO, because there can be more inside directors in the board. Apparently this does not have that much influence, as there seems to be no relation between the percentage of insiders in the board and the CEO compensation (Grinstein & Hribar, 2004). On the other hand, Core et al. (1999) do find a positive relation between the size of the board and the CEO compensation. If the board of directors increases with one member, this can result in an extra compensation of up to $30,601. This is in contrast of the findings by Yermack (1996).

As already mentioned, a board of directors can exist out of inside and outside directors. The percentage of the board that consist out of insiders is another factor than can influence the CEO compensation. The board of directors has a line that is more direct to the CEO when there are more inside directors, because

they fall under the reign of the CEO. The research done by Grinstein and Hribar (2004) finds no significant relation between the percentage of insiders and the CEO compensation. On the other hand, Core et al. (1999) find a negative relation between the percentage of insiders on the board and the CEO compensation. They show that a 1% increase in the percentage of insiders is equivalent to a decrease of $5639 in CEO compensation. This result is rather contrary to what would have been expected. One would think that a larger value of board control would lead to a higher compensation for the CEO. This, however, is not the case. The larger the percentage of insiders in the board, the larger the board control will be. This has a negative effect on the CEO compensation (Boyd, 1994).

2.1.3 CEO characteristics

Two of the main CEO characteristics one can think of are age, gender and experience are characteristics that are of importance when looking at company CEOs. Age and experience are two characteristics that most of the time will go hand in hand. Someone cannot have that much experience if he or she is young of age. However, when looking at experience in terms of CEO experience the relation is not that straightforward. It can for instance be the case that a CEO who is 40 years old, already has 5 years of experience as CEO and a CEO who is 50 years old only has 1 year of experience as CEO. Hallock (1997) shows that there is an increasing but declining rate in the CEO compensation when age increases. This means that the older the CEO gets, the higher the compensation. However, the increase is higher in the earlier years of the CEO. The compensation rises more when age increases from 40 to 41 years compared to an increase of age from 60 to 61 years.

Brick et al. (2006) are looking into CEO experience instead of the age of the CEO, the see experience as the number of years a CEO has at the firm as CEO. They find a positive relation between the CEO compensation and experience. This means that the longer a CEO stays on as CEO of the firm, the higher the compensation will be. This result also is found by Cyert et al. (1997). They show that the rise in compensation is driven by an increase in the base salary of the CEO and not by other forms of compensation, such as bonuses and stock options. It is shown that the level over other compensations actually decrease when a CEO has more experience. On the other hand, a CEO will not stay as the CEO forever. The older the CEO gets, the higher the possibility that another CEO will take over (Yermack, 1996).

Another characteristic that influences the power of the CEO and thus the CEO compensation is the CEO share ownership of a company. It is shown, in the research of Cyert et al. (1997), that there is a negative effect between the percentage of share ownership of the CEO and the CEO compensation. Meaning that an increase in the share ownership decreases the compensation of the CEO. This is confirmed by Core et al. (1999). They find that an increase in the CEO share ownership of 1% will, as a result, lead to a decrease of $8027 in the CEO compensation. However, this is a minor decrease in the compensation

compared to the decrease as a result of a 5% stake in company shares by another board member. If there is another board member with at least 5% of the company shares, this will reduce the CEO compensation with $149,389. Here it is thus shown that more CEO power, because of a higher percentage of company shares owned, results in a lower CEO compensation.

2.1.4 Deal characteristics

A deal is characterized by a lot of different factors. These factors will have an effect on the CEO compensation as well. Look for instance at the announcement of a deal. When a merger or acquisition is announced, this comes together with the so called abnormal announcement return. This is equal to the cumulative abnormal return (CAR) around the announcement date. Looking into the research of Brick et al. (2006) it is shown that there is a positive relation between the CAR and the CEO compensation. This means that a higher CAR will result in a higher compensation. Bliss and Rosen (2001) also found a positive relation between the CAR and the CEO compensation.

Just doing a deal itself also affects the CEO compensation. For instance when a bank is doing a merger, and thus is growing in size, this will result in a larger increase in compensation than when the bank grows internally. If a bank acquires $1 million of new assets through a merger, this will result in an increase in the CEO compensation of $54. This is more than the $30 increase in CEO compensation if the bank has an internal growth of $1 million (Bliss & Rosen, 2001). Yim (2013) looked into company acquisitions and the relation to the CEO compensation as well. In her research, she showed that acquisitions are followed by lasting increases in the CEO compensation. When a CEO announces an acquisition of a company, where the deal value exceeds 5% of the CEOs company's market capitalization, the compensation for the CEO will increase with 12.7%. Grinstein and Hribar (2004) also find that the completion of a deal is one of the major reasons why a CEO gets paid a compensation. In 38% of the deals the examined, the completion of the deal was seen as one of the reasons why a compensation was paid out to the CEO. All in all, it can be said that there is a positive relation between the CEO compensation and the deal completion.

Grinstein and Hribar (2004) also look into the time to complete a deal, which is measured as the number of days between the announcement of the deal and the deal completion. They show that there is a positive relation between the CEO compensation and the time to complete. The longer it takes for companies to complete a deal, the higher the CEO compensation will be. This sounds a bit strange, however, it is in line with the findings of a positive relation between the return and the CEO compensation. The stock return is increasing in the weeks after the announcement. The longer the time to completion, the higher the return will be. This is up until 30 trading weeks after the announcement (Giglio & Shue, 2014). This higher return will result in a higher CEO compensation, which explains the positive relation between the time to complete a deal and the CEO compensation.

When a company takes part in a merger or acquisition, it has the change to diversify the company. This means that the acquiring company takes over a target company that operates in a different sector. The acquiring company expands its operations to a different sector, resulting in company growth and extra growth opportunities. Besides the growth opportunities the company already had in their own sector, they can now grow in a broader field of expertise. For a CEO to diversify the company, one would therefore think this will result in a higher compensation for the CEO due to an increase in growth opportunities. In their research, Grinstein and Hribar (2004) found mixed results. For the full sample of the research, where the dependent variable is the total CEO compensation, they show a positive relation between diversifying the company and the level of CEO compensation. In their subsamples, were they make use of other specifications for the CEO compensation, they found insignificant results.

2.2 Value creation

Second, the value created in mergers and acquisition is explained using existing literature. Mergers and acquisition create value for the companies involved in the deal. This can be shown by looking at the abnormal announcement return of the deal. The abnormal announcement return is estimated as the CAR in the days around the announcement of the deal. The days around the deal are also called the event window. The event window differs in length for most of the researches, but overall it is a short period of time. The abnormal announcement return often is negative for the shareholders of the acquiring company and positive for the shareholders of the target company (Datta et al., 1992). There are, however, researches that do find positive abnormal announcement returns for the shareholders of the acquiring company (Dodd & Ruback, 1977). They show a positive abnormal return of 2.83% when the deal is completed and of 0.58% when the deal is not completed. On the other hand, shareholders of the target company earn abnormal returns of 20.89% and 18.96% when the deal is completed or not completed respectively. Alexandridis et al. (2017) show a positive abnormal return for the acquiring company of 1.05%, for deals done after 2009. This is close to the abnormal announcement return of 1.1% for acquiring shareholders found by Moeller, Schlingemann and Stulz (2004). This 1.1% means that the shareholder value increases with $5.64 for every $100 spend in the acquisition. In the research done by Dodd (1980), he shows a positive abnormal announcement return for target shareholders as well. The target shareholders earn on average an abnormal return of 4.30% on the announcement day and the day before the announcement this is even higher, namely 8.74%. Like in most of the researches, such as Chikh and Filbien (2011), Dodd (1980) finds negative abnormal returns for the shareholders of the bidding firms. The abnormal return the day before the announcement is -0.54% and on the announcement day the abnormal return is -0.62%. The negative returns are small, but they are significantly different from zero.

There are a different characteristics that affect the abnormal announcement return and therefore the company's value creation. In the next subsections, these characteristics will be discussed separately.

2.2.1 Company characteristics

Company status is one of the first things that pops-up when someone takes a look into a company. A company can by public or private. A public company is listed on a stock exchange and a private company is not. The researches done by Fuller, Netter and Stegemoller (2002), Harford, Humphery-Jenner and Powell (2012) and Masulis, Wang, & Xie (2007) all show that value is created in acquisitions where the target is a private company, public targets tend to destroy value for the shareholders of the acquiring company as shown by Field and Mkrtchyan (2017).

A company's size is one of the most important company characteristics and it largely affects the abnormal returns at the announcement of a deal. For mergers and acquisitions of public companies, the abnormal return for the shareholders of the acquiring company is around two percentage points lower for larger acquirers. This means that the larger the acquiring company is, the lower the abnormal announcement returns will be (Moeller et al., 2003, 2004). The research done by Alexandridis et al. (2017) find the same result. They also show a negative relation between the size of the acquiring company and the acquiring shareholder return. The same is shown by Field and Mkrtchyan (2017) and by Harford et al. (2012). The research done by Aktas, De Bodt, Bollaert and Roll (2019), on the other hand, find a positive relation between the acquirers size and the abnormal announcement return for the shareholders of the acquiring company.

Another company characteristic, which is used as an estimate for the overvaluation of a company, is the market-to-book ratio. A high market-to-book ratio is associated with growth stocks and a low market-to-book ratio is associated with value stocks, as described by Lakonishok et al. (1994) and already discussed in the previous section. Companies with a high market-to-book value are also seen as overvalued companies. This is because they have high prices compared to their accounting measures. Deals done by companies which are overvalued result in a higher abnormal announcement return, it increases the value creation for the shareholders of the acquiring company. This positive relation between the market-to-book value of the acquirer and the acquirer return is shown in the research done by Alexandridis et al. (2013) and confirmed by Alexandridis et al. (2017).

2.2.2 Governmental characteristics

As already described, one of the CEO characteristics is the measure of the CEO experience at the firm, this is also called CEO tenure. It is mentioned that there is a positive relation between the number of years that the CEO is the CEO of the company and the CEO compensation. The same positive relation is found for the value creation. The longer a CEO is the CEO of the company, the higher the value

created for the shareholders of the acquiring company. This means that the shareholders of the acquiring company will yield a higher abnormal announcement return if the CEO tenure increases (Field & Mkrtchyan, 2017).

The CEO pay slice described by Bebchuk et al. (2011) also has an effect on the abnormal announcement return of the company. It is shown that a deal done by a company which has a higher CEO pay slice will result in a lower abnormal announcement return for the shareholders of the acquiring company. It increases the probability of receiving negative abnormal announcement returns.

The CEO can be the chairman of the board of directors, as already mentioned. This is also called CEO duality. If the CEO also is the chairman of the board, it is found that this has a negative effect on the abnormal announcement returns for the shareholders of the acquiring company. This thus means that they will yield a lower return and less value is created (Masulis et al., 2007).

The research done by Swanstrom (2006) finds a relation between the size of the board of directors and the abnormal announcement return of the shareholders of the acquiring company. If the size of the board of directors of the acquiring company increases, this will result in a higher abnormal announcement return. This means a positive relation between the board size and the acquirers' abnormal announcement return.

The percentage of shares owned by the CEO also has an effect on the value created when doing a deal. This is shown in the research done by Cosh, Guest, & Hughes (2006). They find a positive relation between the CEO share ownership and acquiring company performance. Meaning that a larger percentage of shares owned by the CEO will result in a higher company return. The CEO will benefit from a higher return because he has a larger stake in the company shares and therefore will put more effort in completing the deal.

2.2.3 Deal characteristics

The acquisition premium can be a proxy for the deal size. A higher premium means that a larger amount is paid for the target company than what their actual value is. This means that the acquiring company is overpaying the target company. The larger the premium paid for a target, the lower the abnormal announcement return for the shareholder of the acquiring company is. A 1% increase in the premium results in a 0.36 percentage points decrease in the acquiring shareholders' abnormal returns (Alexandridis et al., 2013). Typically, it takes a large acquirer to buy a large target. This means that there is a relation between the size of the acquirer and the deal value. Acquisitions by large acquirers result in negative abnormal returns, because they buy large targets and this results in higher loses. This means that there is a negative effect between the size of the deal and the value created for the

shareholders of the acquiring company (Alexandridis et al., 2013). It is also shown in the research of Fuller et al. (2002), that there is a larger loss if the target firm is of a larger size. A larger target size has a positive effect on the deal value, this indicates again that a larger deal value destroys value for the shareholders of the acquiring company.

The method of payment is one of the deal characteristics that is in most researches when looking at the value creation through mergers and acquisitions. A deal can be financed using cash, stocks or a mix of the two. A payment using company stocks takes more time to complete most of the time and as a consequence leads to higher transaction costs. This will thus result in a lower return for the shareholders. Cash offers have an immediate effect on the tax liabilities of the shareholders and therefore they want to have a higher premium on the offer in order to compensate this tax liability. This will result in a higher return for the shareholders. Both the bidding and target company's shareholders are better off when a deal is financed using cash (Datta et al., 1992). This is confirmed by the research of Alexandridis et al. (2017). The abnormal return for shareholders of the acquiring company in public deals is 1.59% lower for deals financed using company stock compared to deals financed with cash. Alexandridis et al. (2013) show that the abnormal returns for deals financed with stock are 1.7% lower than the abnormal returns for deals financed with cash.

The difference between a merger and a tender offer is that in mergers, the management or board of directors of the bidding firm negotiates with the management or board of directors of the target firm. If the negotiations are approved by the target company's management, then the target shareholders are involved in the deal process. When doing a tender offer, the bidding firm's management directly targets the shareholders of the target company, the deal can then be either friendly or unfriendly (Datta et al., 1992). When looking at the influence of a deal being a merger or a tender offer on the return around the announcement of the deal, Datta et al. (1992) find that there is no significant relation between the deal being a tender offer and the wealth creation for shareholders of the bidding firm. For shareholders of the target firm they do show a positive relation. If the deal is a tender offer, the shareholders of the target firm get a higher return. Loughran and Vijh (1997) do show a relation between a deal being a tender offer and the abnormal announcement returns for the acquiring shareholders. They show that tender offers result in a higher value creation for the shareholders of the bidding firm.

When doing a deal a company can diversify by acquiring a company in a different sector than the sector in which the bidding firm operates. Or the bidding firm can buy a company in its own sector. Datta et al. (1992) show that bidding firms create a higher shareholder return, thus create more value, when acquiring a company within the same industry. Acquiring a company in the same industry or sector is also called a horizontal merger. The research by Eckbo (1983) shows that a horizontal merger, so not diversifying, yields a positive abnormal return for shareholders of both the bidding and target company.

This is because it is much easier for companies within the same industry to efficiently work together when the companies are merged.

Another important aspect of the deal characteristics is whether a deal is completed or not. It is shown by Jensen and Ruback (1983) that shareholders of the bidding firm yield a higher return when the deal is completed compared to when the deal is not completed. This indicates a positive relation between the deal completion and the abnormal announcement returns of the bidding company. The same relation is shown by Dodd & Ruback (1977). They only look into tender offers and find that the shareholders of bidding firms earn positive abnormal returns only if the deal is completed. Shareholders of the target firm earn positive abnormal returns whether the deal is completed or not. The research by Dodd (1980) confirms these findings. Shareholders of target firms earn large positive abnormal returns when the deal is completed. They earn on average an abnormal return of 10.00% or 7.72% on the day before the announcement and an abnormal return of 3.41% or 5.01% on the day of the announcement for completed or uncompleted deals respectively. The return for the target shareholder is thus even higher when the deal is not completed. For the shareholders of the bidding firms there are negative abnormal returns for both the completed and uncompleted deals. The returns are -0.89% or -0.23% on the day before the announcement and -0.20% or -1.01% on the announcement day for completed or uncompleted deals respectively. Datta et al. (1992) also investigated whether the completion of the deal had an effect on the abnormal announcement returns of the deal and they found no significant relation. This means that the returns for shareholders of both the bidding and target company are not significantly different from each other when the deal is completed or not.

2.3 Deal completion

At last, the deal completion process is described. Maybe the most important part of a deal in mergers in acquisitions is whether the deal is completed or not. In the end, that is what it is all about. All hard work leads to the moment where the deal can be closed. There are a lot of different characteristics that may influence the completion of the deal. These characteristics are described in the following subsections.

2.3.1 Company characteristics

The research done by Baker, Pan and Wurgler (2012) looks into the size of the bidding and the target firm and the relation with the completion of the deal. They show that an increase in the size of a target company decreases the probability of completing the deal. There is a negative and significant relation between the target size and deal completion. On the other hand, an increase in the size of the bidding company will result in an increase of the probability of completing the deal. This thus is a positive and significant relation between the size of the acquiring company and the deal completion. The exact same relation between the size of the target company and the deal completion and between the size of the acquirer and the deal completion is found in the research done by Aktas et al. (2019). The same positive

relation between the size of the acquiring firm and the deal completion is found by Kau, Linck, and Rubin (2008). The larger the size of the acquiring company thus is, the higher the probability that the deal is completed.

The company status of the acquiring firm also has an effect on the deal completion. If the acquiring company is a public company compared to when it is a private company, the probability that the deal is completed will increase (Skaife & Wangerin, 2013). On the other hand, if the target is a public company this will result in a decrease of the probability that the deal is completed (Dikova, Rao Sahib, & van Witteloostuijn, 2010; Kau et al., 2008).

2.3.2 Governmental characteristics

There are governmental characteristics that influence the completion of a deal. If the CEO of the company also is the chairman of the board, the probability of completing the decreases (Chikh & Filbien, 2011). Earlier in this research it is shown that the CEO compensation increases when the CEO also is the chairman of the board, this relation thus is positive. Now, a negative relation between CEO duality, when the CEO is also chairman of the board, and the deal completion is shown.

There is a positive relation between the size of the board and the completion of the deal. This means that the probability of completing a deal increases when the size of the board increases with a member (Chikh & Filbien, 2011). In the earlier paragraph it is shown, that a larger board of directors decreases the CEO compensation, this relation thus was negative. Now a positive relation between the completion of the deal and the board size is found. Looking at the governmental characteristics of the CEO duality and the board size, it seems that there is a negative relation between the CEO compensation and the deal completion.

2.3.3 Deal characteristics

As earlier mentioned, Baker et al. (2012) show a negative relation between the deal completion and the size of the target company. A larger target company is accompanied by a larger deal value, most of the time. This would thus say that an increase in the deal value will result in a decrease of the probability of completing the deal. The relation between the deal value and deal completion is thus expected to be negative.

When doing a horizontal merger, or when not diversifying the company, this creates more value for the shareholders of both the acquiring and target company. On the other hand, not diversifying the company decreases the probability of completing the deal. This is shown by the research of Chikh and Filbien (2011). There is a significantly and negative relation between not diversifying and the deal completion.

The research done by Skaife and Wangerin (2013) finds the exact opposite of these findings. They do find a positive relation between not diversifying the company and the deal completion.

It is already shown that a tender offer results in value creation for the shareholders of the acquiring company. Baker et al. (2012) also show a positive relation between the deal completion and the deal being a tender offer. If the deal thus is a tender offer this will result in an increase of the probability that the deal is completed. The same is found by Bates, Becher and Lemmon (2008) and by Skaife and Wangerin (2013). They also show that tender offers are completed more often compared to cash offers. A reason for this could be because tender offers are completed in a faster pace because there is no need for a shareholder meeting to approve the deal and there is no need for a proxy review process by the SEC.

The method of payment is another important deal characteristic that affects the value creation for shareholders of both the bidding and the acquiring firm. It is already mentioned that more value is created when the deal is financed using cash instead of stocks. However, when the deal is financed using cash, this will result in a decrease in the probability of the deal being completed. This means that there is a negative relation between the deal completion and a cash payment of the deal and a positive relation between the deal completion and a deal financed with stocks (Baker et al., 2012; Bates et al., 2008). On the other hand, Dikova et al. (2010) show a positive relation between cash payment and the deal completion. They show that a deal is completed more often if the deal is financed with cash.

Chikh and Filbien (2011) are approaching deal completion from the return perspective. They find that companies tend to cancel the deal if the market reacts unfavourable on the announcement of the deal. This means that the deal is cancelled if the return for the shareholders of the acquiring firm is negative. This means that there is a positive relation between the deal completion and the abnormal announcement return of the acquiring company, the same was found by Jensen and Ruback (1983). The research done by Skaife and Wangerin (2013) also looks into the relation between the CAR and the deal completion. They also show a positive relation. This means that the probability of the deal completion thus indeed increases when the market reacts favourable, meaning a positive abnormal announcement return, to the announcement of the deal. Luo (2005) also finds a positive relation between the abnormal announcement return of the shareholders of the acquiring company and the deal completion.

When looking at deal characteristics and their effect on the deal completion, one cannot forget the 52-week high price. The 52-week high price is the highest stock price over 335 days, ending 30 days prior to the announcement of the deal. When the offer price per share comes closer to the value of the 52-week high price, the probability of the deal completion increases. This is up until the 52-week high price is equal to the offer price. When the 52-week high price equals the offer price a jump is made, indicating

a discontinuous process and a large increase in the probability of the deal completion. When the offer price is higher than the 52-week high price, the probability of completing the deal is even higher (Baker et al., 2012).

2.4 Hypotheses

First, this research focuses on the deal value and how this is affected by deal, company and governmental characteristics. This research tests the following hypotheses:
Hypothesis 1.1: Larger acquiring companies are involved in larger deals.
Hypothesis 1.2: More powerful CEOs are involved in larger deals.
Hypothesis 1.3: The deal value is lower for completed deals compared to uncompleted deals.

Second, the CEO compensation is looked into. It is investigated which company, deal and governance characteristics influence the CEO compensation. Taking the existing literature into account, this results in the following hypothesis:
Hypothesis 2.1: The CEO compensation is higher for larger deals
Hypothesis 2.2: The CEO compensation increases if the size of the acquiring company increases.
Hypothesis 2.3: The CEO compensation increases when more value for the shareholders of the acquiring company is created.
Hypothesis 2.4: CEO power, and therefore compensation, increases when the CEO owns a larger proportion of stocks.
Hypothesis 2.5: More powerful CEOs are involved in larger deals.

Third, this research focuses on the completion of deals in mergers and acquisitions. It is investigated what affects the completion of the deal. When looking at the existing literature, the following hypothesis can be determined:
Hypothesis 3.1: The probability of completing a deal within mergers and acquisition increases when more value is created for the shareholders of the acquiring company.
Hypothesis 3.2: The probability of completing a deal is larger for smaller deals.
Hypothesis 3.3: A larger CEO compensation and thus a more powerful CEO will result in a higher probability of completing a deal.
Hypothesis 3.4: The probability of completing the deal increases with the size of the acquiring company.

At last, this research will take a look into the value created when doing a deal. It is investigated which company, deal and governance characteristics influence the value created. When looking into the already existing literature this results in the following hypothesis:
Hypothesis 4.1: There is a negative abnormal announcement return for the shareholders of the acquiring company.

Hypothesis 4.2: The abnormal announcement return for the shareholders of the acquiring company decreases when the acquiring company is larger.

Hypothesis 4.3: The abnormal announcement return for the shareholders of the acquiring company decreases with the deal value.

Hypothesis 4.4: The abnormal announcement return for the shareholders of the acquiring company decreases when the CEO has more power.

3. Data & Methodology

This section will describe how the sample for this research is collected. This research makes use of data taken out of four different databases. A table with the descriptive statistics is shown as well. Next to the data selection, the variables will be described. At last, the research methodology in order to answer the research question is described.

3.1 Data

This research uses the ThomsonOne database to come up with the dataset for the mergers and acquisition. In order to get the data needed for this research, some restrictions on the data are implemented in the ThomsonOne search engine. This research focusses on deals done by US public companies. This means that both the acquiring and target company are US public companies. This is necessary in order to have easy access to all the company information needed. Public companies have to release annual reports which contain information about the company's profit and loss statement, the balance sheet and the cash flow statement. These three statements contain all the necessary company information. Private companies do not have to release these reports and therefore it is more difficult to find company information, if the information can be found at all. Also the company's stock price is needed in order to perform the event-study to calculate the CAR. This is only available for public companies. Deals in which both the acquiring and target company are public companies often are of a larger deal value and this is why public targets are used in this research as well. The acquiring and target companies are both from the US because the exchange rate can be left out of the calculations and all companies have to report to the same government, meaning the same company legislation for all companies. This research takes into account both completed and uncompleted deals for the period of January 2011 until December 2018. The use of both completed and uncompleted deals is necessary in order to test which factors influence the deal completion. The most recent period of time, for which data is available, is used. A longer timeframe would have resulted in incorporating the financial crises, however, it is best to leave the financial crises out of the dataset. Therefore, the period starts in January 2011. It ends in December 2018, because the Center for Security Stock Prices only has data on the company's stock prices up until then. The deal needs to have a significant impact on the market in order to analyse the change in stock prices and the effect of the company, board, CEO and deal characteristics on this deal. Therefore, a minimum deal value of $1 million is needed (Aktas et al., 2019; Alexandridis et al., 2013; Chikh & Filbien, 2011; Fuller et al., 2002; Harford et al., 2012; Masulis et al., 2007; Moeller et al., 2003). When doing the deal the acquiring company has to take full control of the target firm when the deal is completed resulting in owning 100% of the shares of the target. The acquiring company cannot own more than 50% of the shares of the target company when doing the deal (Harford et al., 2012; Masulis et al., 2007). At last, the company has to acquire a target company different from the company itself. Meaning, the dataset of the deals does not contain deals in which a subsidiary is

acquired, or deals in which small parts of the company are bought back. The acquiring and target company must have different company tickers. This all results in a dataset of 1025 deals out of which 909 are completed and 116 are uncompleted deals. The summary of the deal criteria is given in Table 1.

Table 1: Deal criteria

This table describes the search criteria used in the ThomsonOne database in order to get to the sample of mergers and acquisitions used in this research. The criteria described are the acquirer and target nation and status, the deal status, the period in which the deal was announced, the deal value and the percentage of shares owned by the acquiring company.

Criteria		Number of deals
All mergers and acquisitions		N/A
Acquirer nation	US	351,724
Acquirer status	Public	167,171
Target nation	US	141,638
Target status	Public	42,083
Deal status	Completed/ Uncompleted	19,426
Date announced	01/01/2011 - 31/12/2018	2441
Deal value	> $1 million	2294
% of shares owned for the acquiring company	<50% before the deal 100% after the deal	1025
Total number of deals		1025

The Center for Research in Security Prices (CRSP) is used in order to get data on the stock prices for all the acquiring companies. This is needed to perform the event-study and look into the value created for the shareholders of the acquiring firms, after which, it can be tested what deal, company and governmental characteristics influence the value created. CRSP is the US stock and index database. Next to the security stock prices, the value and equal weighted market return is presented. This can be used in the event-study as well. The CRSP database did not provide us with data on all the acquiring companies. Some companies and deals are therefore eliminated from the sample. Eventually, this all results in a sample of 974 deals out of which 869 are completed and 105 are uncompleted deals. Looking at Panel A of Table 2, it is shown that the average deal value is larger for uncompleted deals and that there is a significant difference, at a 1% significance level, of $7.445 billion between the deal value of uncompleted and completed deals. It is also shown that the price per share paid to the shareholders of the target company is on average larger for uncompleted deals compared to completed deals. The difference is $9.91 and significant at a 5% significance level. It can be seen that the 52 week high variable is higher than 0.5 for completed deals and lower than 0.5 for uncompleted deals. This means that the price per share paid for the target companies is on average higher than the 52 week high price for completed deals and lower than the 52 week high price for uncompleted deals. The difference between the completed and uncompleted deals, for the 52 week high variable, is highly significant at a

1% significance level. This means that deals are completed more often if the price per share paid for the target company is higher than the 52 week high price. Panel A of Table 2 shows no further significant differences between the deal statistics of completed and uncompleted deals. What can be seen for both completed and uncompleted deals is the fact that most of the deals are mergers, because the mean value for the tender variable is 0.130 and 0.095 respectively and this is closer to zero than to one. The same can be said about the diversification variable. This equals 0.158 for completed and 0.200 for uncompleted deals, meaning that most of the deals are non-diversifying or horizontal mergers and acquisitions. When taking a further look into Panel A of Table 2 it can be seen that there is a various mix in the method of payments. It seems that there is not one method that is more preferred in the sample of deals. Lastly, it is shown that there is no significant difference in the number of days between the announcement of the deal and the deal completion and between the announcement of the deal and the rejection of the deal, the number of days are 147 and 157 respectively. A Variable description for the deal characteristics can be found in Panel A of Table 3.

Compustat is used in order to get data on company characteristics, such as company size, market-to-book ratio and ROA, for acquiring companies. This information can be used in the regressions in order to see if these characteristics can explain part of the abnormal announcement return and CEO compensation and whether or not these characteristics can explain the deal completion. When using Compustat, data can be found for 883 deals out of which 791 are completed and 92 are uncompleted. For 91 deals, no data could be found. This, however, does not influence the results of this research, because the data that could be collected is sufficient enough to perform the tests needed. Looking at Panel B of Table 2, it is shown that there is a mix in available information for the different company characteristics. The only significant difference found between completed and uncompleted deals is the ROA. The ROA is larger for acquiring companies which did not complete the deal. The difference is 1.5% and significant at a 5% significance level. Panel B of Table 2 thus shows there is no significant difference in the size of the acquiring company for completed and uncompleted deals. This can been seen when looking at the variable for the natural logarithm of the size, the market value and when looking at Tobin's Q. Tobin's Q can be seen as an alternative measure for the size of the company. A Variable description for the company characteristics can be found in Panel B of Table 3.

ExecuComp is used in order to get data for the governmental characteristics, such as, the CEO compensation, the size of the board of directors and the percentage of company shares owned by the CEO. ExecuComp includes information about executive compensation of more than 12,500 executives of companies which are included in the S&P 500, S&P 400 MidCap and the S&P SmallCap 600. When using the ExecuComp database information about executive compensation is found for 538 deals out of which 480 are completed and 58 are uncompleted. This is enough data in order to perform the tests needed in this research.

Table 2: Descriptive statistics

This table contains the descriptive statistics. In Panel A of the table the deal characteristics are shown, Panel B of the table shows the company characteristics of the acquiring companies and Panel C of the table shows the governmental characteristics for CEOs and the board of directors of the acquiring company. The sample is split into completed and uncompleted deals. For each of the two categories the number of observations, the mean and the standard deviation of the variables is shown. In the columns on the right side of the table, the difference in the means of the two categories is shown. A t-test is used in order to test the null hypothesis that the mean value of the completed deals equals the mean value of the uncompleted deals. The t-statistics are shown in the last column of the table. The null hypothesis can be significant at a significance level of 10%, 5% and 1%, which is equivalent to *, ** and *** respectively.

Characteristics	Completed			Uncompleted			Difference	
	N	Mean	St. dev	N	Mean	St. dev	Mean	t-stat
Panel A: Deal characteristics								
Price per share	869	32.127	37.163	102	42.035	57.347	9.908**	2.382
Deal value	869	2849.721	7737.745	105	10294.740	24822.260	7445.021***	6.595
Diversified	869	0.158	0.365	105	0.200	0.402	0.042	1.111
Days between	869	147.409	93.794	105	156.971	160.338	9.563	0.899
Tender	869	0.130	0.337	105	0.095	0.295	-0.035	-1.013
Cash	869	0.349	0.477	105	0.429	0.497	0.080	1.614
Stock	869	0.280	0.449	105	0.219	0.416	-0.061	-1.316
Mix	869	0.372	0.484	105	0.352	0.480	-0.019	-0.387
52 week high	869	0.585	0.493	105	0.438	0.499	-0.146***	-2.872
Panel B: Company characteristics								
Size	791	8.597	1.643	92	8.550	1.922	-0.047	-0.255
Market value	781	17657.360	49060.420	87	22429.440	46339.580	4772.079	0.865
M/B ratio	646	2010.254	12751.780	80	2082.629	4142.210	72.375	0.050
ROA	554	0.047	0.047	63	0.062	0.057	0.015**	2.428
ROE	550	0.064	0.058	63	0.068	0.068	0.004	0.458
Sales	644	11167.100	25717.610	78	12524.670	25416.560	1357.569	0.441
R&D intensity	275	0.057	0.058	39	0.074	0.111	0.018	1.540
Net income	554	1350.707	3487.612	63	1786.603	4378.724	435.896	0.914
Book value	646	222.999	1770.172	80	148.798	1100.793	-74.201	-0.366
Tobin's Q	791	1.513	0.959	92	1.659	1.038	0.146	1.368
Panel C: Governmental characteristics								
Total compensation	478	9493.170	10552.550	58	8308.788	6593.798	-1184.382	-0.835
Cash compensation	478	1138.988	943.458	58	1372.805	1262.379	233.817*	1.712
Salary	478	955.762	424.315	58	1034.004	540.776	78.242	1.284
Age	478	56.870	5.831	58	56.879	6.668	0.009	0.011
% of shares owned	478	1.110	3.274	58	0.801	1.970	-0.309	-0.703
Gender	478	0.958	0.200	58	0.966	0.184	0.007	0.266
CEO pay slice, total compensation	478	0.414	0.109	58	0.422	0.116	0.008	0.551
CEO pay slice, cash compensation	478	0.319	0.089	58	0.337	0.093	0.018	1.440
CEO pay slice, salary	478	0.319	0.079	58	0.332	0.077	0.014	1.252
Chairman	478	0.506	0.500	58	0.431	0.500	-0.075	-1.081
Tenure	478	7.628	6.584	58	7.362	6.920	-0.266	-0.288
Board size	480	10.079	2.950	58	9.552	3.414	-0.527	-1.264
% of insiders	477	0.168	0.128	58	0.178	0.113	0.010	0.586

When looking at Panel C of Table 2, the governmental characteristics of the CEO and the board of directors of the acquiring company are shown. There is only a slight significant difference between the CEO cash compensation for completed and uncompleted deals, $1.138 million and $1.372 million respectively. The difference, however, is only significant at a 10% significance level. It does seem that the CEO compensation is higher for uncompleted than for completed deals. This result is unexpected when taking earlier researches into account. What can be seen in Panel C of Table 2, is that the average age of the CEOs of acquiring firms is around 57, it thus seems that the CEOs are older. Whereas, the experience of the CEO as CEO of the acquiring company is 7.628 years when looking at completed deals and 7.362 years when looking at uncompleted deals. It also seems that most of the CEOs are males, given the fact that the average of the male variable is close to one. The CEOs, on average, own around 1% of the company shares in both the completed and uncompleted deals. In around 50% of the times in completed deals and 43% of the times in uncompleted deals, the CEO also is chairman of the board of directors. The size of the board of directors is almost the same in both categories as well. The average number of board members in completed deals is 10.08 and in uncompleted deals it is 9.55 and the percentage of inside board members is 16.8% and 17.8% respectively. When looking at the CEO pay slice, it is shown that the CEO compensation represents more than 30%, in both completed and uncompleted deals, of the total compensation of the top 5 company executives. A Variable description for the company characteristics can be found in Panel C of Table 3.

3.2 Methodology

First, an event-study is done in order to calculate the abnormal announcement return and the cumulative abnormal announcement return. This will show the value created for the shareholder of the acquiring company when the company is involved in a deal. In order to do the event-study, a control-period and a test-period or event-period is needed. The control period is used in order to make estimates for α and β in the market model. This research uses the CRSP equal-weighted return to represent the market return (Alexandridis et al., 2017; Brown & Warner, 1985; Masulis et al., 2007; Moeller et al., 2003). It is described by Brown and Warner (1985) that the control period can exist out of a maximum of 250 trading days around the event, t=0. This research will take on a control period of 200 trading days, this results in a control period t=[-210,-11] (Masulis et al., 2007). The control period is up until a few days before the event. This is done, because the estimates for α and β then are not influenced by the occurrence of the event. As already mentioned, the control period will be used in order to make estimates $\hat{a}_i$ and $\hat{b}_i$ for α and β, using the market model:

$$R_{it} = \alpha_i + \beta_i R_{Mt} + \mu_{it}$$

Where R_{it} stand for the return of the acquiring company i at time t, R_{Mt} is the CRSP equally weighted market return at time t and μ_{it} is the error term for company i at time t.

Table 3: Variable description

This table gives a description of the variables used. Panel A gives a description of the variables of the deal characteristics, Panel B gives a variable description for the company characteristics and Panel C describes the variables indicating the governmental characteristics.

Characteristics	Description
Panel A: Deal characteristics	
Price per share	Price per share paid $ to the shareholders of the acquiring company
Deal value	The deal value in million $, the price paid for the target company
Diversified	A dummy variable which is equal to 1 if acquirer buys a target in a different sector and 0 otherwise
Days between	Shows the number of days between the announcement date and the completion/withdrawal date
Tender	A dummy variable which is equal to 1 if the deal is a tender offer and 0 otherwise
Cash	A dummy variable which is equal to 1 if the deal is fully paid in cash and 0 otherwise
Stock	A dummy variable which is equal to 1 if the deal is fully paid in stocks and 0 otherwise
Mix	A dummy variable which is equal to 1 if the deal is paid with a mix of cash and stocks and 0 otherwise
52 week high	A dummy variable which is equal to 1 if the price per share paid for the target company is higher than the 52 week high price and 0 otherwise
Panel B: Company characteristics	
Size	A measure for the size of the acquiring company, measured by taking the natural logarithm of the company's total assets
Market value	The market value of the company in million $
Market-to-book ratio	The market value of the company divided by the book value
ROA	The return on assets in %, the net income divided by the total assets of the company
ROE	The return on equity in %, the net income divided by the common shares outstanding times the annual fiscal closing price
Sales	The company sales in million $
R&D intensity	The R&D expense divided by the total assets of the company
Net income	Variable which shows the net income or loss of the company in million $
Book value	The book value of the company in million $, the common shares outstanding times the annual calendar closing price
Tobin's Q	An alternative measure for the company's size, it is the total market value divided by the total asset value of the company
Panel C: Governmental characteristics	
Total compensation	It is the total CEO compensation in thousand $, measured as follows: salary + bonus + other annual + restricted stock grants + LTIP pay-outs + all other + value of option grants
Cash compensation	It is the CEO cash compensation in thousand $, measured as the salary + bonus
Salary	It is the salary of the CEO in thousand $
Age	The age of the CEO in years
% of shares owned	The percentage of company shares owned by the CEO
Gender	A dummy variable that is equal to 1 if the CEO is a male and equal to 0 otherwise
CEO pay slice, total compensation	The fraction of the total CEO compensation divided by the sum of the total compensation of the top 5 executives of the company
CEO pay slice, cash compensation	The fraction of the CEO cash compensation divided by the sum of the cash compensation of the top 5 executives of the company
CEO pay slice, salary	The fraction of the CEO salary divided by the sum of the salaries of the top 5 executives of the company
Chairman	A dummy variable that is equal to 1 if the CEO also is chairman of the board of directors and 0 otherwise
Tenure	The number of years the CEO is the CEO of the company
Board size	The size of the board of directors
% of insiders	The percentage of inside directors in the board of directors

The event- or test-period is used in order to calculate returns in case the event did not happen. The research of Andrade, Mitchell and Stafford (2001) describes that an event period of three days surrounding the event period is the most commonly used event period in mergers and acquisitions. Therefore, the event-period in this research will exist out of three trading days surrounding the event as well, the event-period equals t=[-1,1] (Alexandridis et al., 2017; Alexandridis et al., 2013; Field & Mkrtchyan, 2017; Moeller et al., 2003). The estimates $\hat{a}_i$ and $\hat{b}_i$ of the unaffected α and β are again used in the market model:

$$R_{it}^{*} = \hat{a}_i + \hat{b}_i R_{Mt}$$

Where, R_{it}^{*} is the normal return, when the event did not happen, for acquiring company i at time t, $\hat{a}_i$ and $\hat{b}_i$ are the estimates of α and β for company i and R_{Mt} is the CRSP equally weighted market return at time t. For the calculation of the returns to happen, there are some requirements for the event and estimation period. There must be data available during the entire event period t=[-1,1] and for the estimation period it must hold that there is data for at least 30 trading days in the estimation period and no data can be missing in the last 20 trading days in the event period (Ball & Brown, 1968). If data is missing, the event will be dropped from the sample.

Next, the abnormal announcement returns in the test period are calculated using the following formula:

$$ar_{it} = R_{it} - R_{it}^{*}$$

Where, ar_{it} is the abnormal announcement return for company i at time t, R_{it} is the return affected by the event of company i at time t and R_{it}^{*} is the estimated return of company i at time t, which is not affected by the event. The cumulative abnormal announcement return over the event-period for company i can be calculated using the formula:

$$car_i = \frac{1}{3}\sum_{t=-1}^{1} ar_{it}$$

When the cumulative abnormal return for each company has been calculated, the average cumulative abnormal return can be calculated. The sample is split into completed and uncompleted deals in order to show the difference in the abnormal announcement return for both categories. So for both the completed and uncompleted deals the average cumulative abnormal announcement return equals:

$$CAR_C = \frac{1}{N_C}\sum_{i=1}^{N_C} car_i \,, C \in \{0,1\}$$

Where, C equals one for completed deals and zero for uncompleted deals, CAR_C is the average cumulative abnormal return for completed and uncompleted deals and N_C is the number of completed or uncompleted deals. In order to test whether or not the average cumulative abnormal announcement return is statistically different from zero, t-statistics need to be calculated. The t-statistics are calculated using the following formulas:

$$s_C^2 = \frac{1}{N_C - 1}\sum_{i=1}^{N_C}(car_i - CAR_C)^2 \, , C \in \{0,1\}$$

$$T2CAR_C = \frac{CAR_C}{s_C/\sqrt{N_C}}, C \in \{0,1\}$$

Where, $T2CAR_C$ stands for the t-statistics for the average cumulative abnormal announcement return for completed and uncompleted deals, dependent of whether C equals zero or one.

After all the calculations for the cumulative abnormal announcement returns have been made, the next step is to show which deal, company and governmental characteristics influence the level of the abnormal announcement return. This is executed using ordinary least squared (OLS) multivariate regressions:

$$car_i = \alpha_i + \beta_{i1}Completed + \beta_{i2}X_{i1} + \cdots + \beta_{in}X_{in} + \mu_i$$

Where, car_i is the cumulative abnormal announcement return for company i and $Completed$ is the dummy variable which indicates if the deal is completed or uncompleted. The X's represent the variables which correspond to the other deal, company and governmental characteristics.

This research wants to show what affects the deal value. Especially, if the completion of the deal affects the deal value. Next to the deal completion it is interesting to see what other variables might explain the level of the deal value. The following OLS multivariate regression is used in order to see which company, deal and governmental characteristics might affect the deal value:

$$Deal\ value_i = \alpha_i + \beta_{i1}Completed + \beta_{i2}X_{i1} + \cdots + \beta_{in}X_{in} + \mu_i$$

Where, the deal value is the dependent variable and $Completed$ is the dummy variable which indicates if the deal is completed or uncompleted. The X's represent the variables which correspond to the other deal, company and governmental characteristics.

Another topic of this research is to determine what deal, company and governmental characteristics influence the level of the CEO compensation. This is tested using OLS multivariate regressions for the different forms of the CEO compensation. For the CEO compensation this research uses three different measures: 1) Salary, 2) Cash compensation, which equals the salary added with the bonus and 3) Total compensation, which equals the salary added with the bonus, other annual compensation, restricted stock grants, LTIP pay-outs, all other compensations earned and the value of option grants. The following regression is executed to test which characteristics influence the level of the compensation:

$$CEO\ Compensation_{i,J} = \alpha_i + \beta_{i1}Completed + \beta_{i2}car_i + \beta_{i3}X_{i1} + \cdots + \beta_{in}X_{in} + \mu_i \, , J \in \{1,2,3\}$$

Where, J equals one if the Salary is used as dependent variable, J equals two when the Cash compensation is used as dependent variable and J equals three when the Total compensation is used as dependent variable. $CEO\ Compensation_{i,J}$ is the compensation for company i and J thus indicates which compensation measure is used. Completed is the dummy variable that indicates when the deal is completed or uncompleted and car_i is the calculated abnormal announcement return for company i. The X's represent the variables which correspond to the other deal, company and governmental characteristics.

At last, the research shows what deal, company and governmental characteristics influence the deal completion process. This can be tested using nonlinear regression models. These models use a binary variable as the dependent variable. There are two models that can be used: the logit and the probit model. The logit regression is executed using the following formula:

$$P(Completed = 1|X_1, \dots X_n) = \frac{e^{\alpha + \beta_1 X_1 + \cdots + \beta_n X_n}}{1 + e^{\alpha + \beta_1 X_1 + \cdots + \beta_n X_n}}$$

This logistics regression estimates the probability whether the deal is completed, controlling for the deal, company and governmental characteristics which are represented by the X's. The other nonlinear regression method is the probit regression and this is executed using this formula:

$$P(Completed = 1|X_1, \dots X_n) = \Phi(\alpha + \beta_1 X_1 + \cdots + \beta_n X_n)$$

Where, $\Phi(.)$ is the cumulative distribution function or CDF of the standard normal distribution. The probit regression also measures the probability if the deal is completed and is controlling for the deal, company and governmental characteristics as well. Using both the logit and probit regression it can be shown that the results are not influenced by the choice of the model. Both models thus indicate the increase or decrease in the probability of the deal completion for the characteristics controlled for in the regressions.

4. Results

This chapter describes the results of this research. Section 4.1 looks into the first component of the research question, the deal value, and how this is affected by company, deal and governmental characteristics. Section 4.2 describes the results of the regressions containing the CEO compensation as dependent variable, explaining the power of the CEO. Section 4.3 describes the results of the nonlinear regressions considering the effect of the company, deal and governmental characteristics on the deal completion, this section answers the research question. Lastly, section 4.4 shows the results of the event-study. Here, the cumulative abnormal announcement return of the acquiring company is shown.

4.1 Deal value

This section describes which characteristics can explain the deal value. The results of the multivariate regression are shown in Table 4. Looking at Table 4, it can be seen that the deal value is affected by the size of the acquiring company. An increase of 1% in the total assets of the acquiring company will result in an increase of $10.312 million in the deal value and this is significant at the 5% significance level. This means larger acquiring companies are involved in larger deals. This confirms hypothesis 1.1 of this research. The reason for this relation may be because larger companies will have more money at hand to do deals. Larger companies are also more willing to take over companies that may become competitors in the future. These companies will help the company grow even further and the large acquiring companies are willing to pay good money for it as well. The larger the company, the larger the sales will be as well and the more sales a company has, the more money it has to invest. This positive relation between the sales of the acquiring company and the deal value is shown in Table 4 as well. An increase in the sales of the acquiring company with $1 million, on average, will result in an increase in the deal value of $51 thousand and this is highly significant at the 1% significance level.

The price per share paid to the shareholders of the target company, by the acquiring company, is part of the deal value. Therefore, the positive relation found in Table 4 is a logical relation. The higher the price per share paid to the shareholders of the target company, the higher the deal value will be. On average, an increase of $1 in the price per share paid will result in an increase of $106.491 million in the deal value.

The deal value is highly affected by the completion of the deal. It can be seen in Table 4 that completed deals have a smaller deal value compared to uncompleted deals and, therefore, hypothesis 1.3 is confirmed. If the deal is completed, this results in a deal value that is, on average, $10.068 billion lower compared to uncompleted deals and this is highly significant at the 1% significance level. A reason for this could be that smaller deals are easier to complete. This is because there is a lot a stake when doing a large deal. It will be more difficult for the CEO to convince the board of directors to come up with a

Table 4: Multivariate regressions for the deal value

This table shows the results for the regressions where the deal value is used as the dependent variable. Model 1 shows the results of the regression where the independent variables are: variables for the size of the acquiring company and the number of sales of the acquiring company, the price paid per share to the shareholders of the target company, a variable that indicates if the deal is completed or not, the number of days between the announcement of the deal and the deal completion or rejection, a variable that indicates if the deal is paid in cash, a variable that represents the age of the CEO of the acquiring company, a variable for the CEO cash compensation, a dummy variable indicating whether the CEO also is chairman of the board, the number of inside directors and the percentage of shares of the acquiring company owned by the CEO. The constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Model	*1*
Size	1031.168**
	(2.28)
Sales	0.051**
	(2.30)
Price per share	106.491***
	(9.00)
Completed	-10,068.340***
	(-5.85)
Days between	16.580***
	(3.43)
Cash	-2842.952**
	(-2.56)
Age	267.032***
	(2.92)
Cash compensation	1.227**
	(2.15)
Chairman	-1728.957
	(-1.58)
Inside directors	-1571.401**
	(-2.11)
% of shares owned	168.686
	(1.01)
Constant	-14,660.860**
	(-2.35)
Adjusted R-squared	0.387
N	470

very large sum of money to complete the deal. When a large sum of money has to be paid for a target company, this means that this target company will be a larger company as well. Merging two large companies will be difficult and comes with more integration costs, making the deal more costly. Both companies have their own structure and working atmosphere. This results in the fact that it will be much

harder and more expensive, due to higher integration costs, to complete the deal. As a result, deals of a higher value will be withdrawn more often.

From Table 4 it can be seen that there is a positive relation between the number of days between the announcement date and the deal completion or rejection and the deal value. This can be explained by the fact that it takes more time to overthink a deal of a higher value. Doing a merger or acquisition is a time intensive process, especially in the case of a larger deal. The results show that a one day increase in the time between a deal is equivalent to an increase of $16.580 million in the deal value and this is significant at the 1% significance level.

A deal that is financed with cash instead of stocks or a mix of stocks and cash results in a lower deal value according to the results in Table 4. A deal is often financed with stocks when the acquiring company is overvalued and as a result this may lead to higher deal values due to the payment with overvalued stocks. As a result, a deal financed with cash results in a deal value that is $2.842 billion lower, on average. This effect is significant at the 5% significance level.

It can be seen that the deal value is positively affected by the CEO cash compensation, Table 4. This means that the deal value is higher when the CEO receives a higher salary and bonus. A reason for this could be due to the bonus for the CEO that comes with completing a deal. This additional bonus is calculated into the deal price. An increase in the CEO cash compensation of $1 thousand will result in an increase in the deal value of 1.227 million and this is significant at the 5% significance level.

An increase in the number of inside directors will reduce the deal value, Table 4. The more inside directors, the more power a CEO has. This indicates that the power of the CEO has a negative relation with the deal value in this case. This is unexpected, because one would think that more powerful CEOs with the help of more inside directors will push through more deals of a higher value. However, if the number of inside directors on the board increase with one member, this will result in a $1.574 billion decrease in the deal value. This negative relation between the power of the CEO and the deal value is much higher than the positive relation between the power of the CEO, measured by the cash compensation, and the deal value. The large negative relation found between the power of the CEO and the deal value thus rejects hypothesis 1.2 that more powerful CEOs are involved in larger deals.

4.2 CEO compensation

To test which company, deal and governmental characteristics influence the level of the CEO compensation, multivariate regressions are done. The results of multivariate regressions are shown in Table 5. The CEO compensation can be measured in three different ways: total compensation, cash compensation and the salary. Each of these three measures is used as an independent variable in the

multivariate regressions. In Table 5, the model indicated with an ‘a’ represents the regression where the total compensation is the dependent variable, the model indicated with a ‘b’ represents the regression where the cash compensation is used as the dependent variable and the model indicated with a ‘c’ represents the model where the salary is used as the dependent variable.

One of the most important deal characteristics is the information about whether the deal is completed or uncompleted. The researches done by Bliss and Rosen (2001), Grinstein and Hribar (2004) and by Yim (2013) all show that the CEO compensation is higher when the deal is completed. This result is not showed in this research. Table 5 shows that there is no relation between the deal completion and the CEO compensation for all three measures of the CEO compensation. Therefore, it cannot be said that the CEO compensation for completed deals is higher than the CEO compensation for uncompleted deals. It thus seems that there are no extra bonuses related to the completion of the deal.

Next, this research looks into which company characteristics can explain the level of the CEO compensation. Table 5 shows a positive relation between the size of the acquiring company and all three measures of the CEO compensation. The effect is significant at the 1% significance level for the models ‘a’, ‘b’ and ‘c’ in Table 5. The positive relation between the CEO compensation and the company size found in this research thus confirms hypothesis 2.2 and is in line with the earlier researches of Bliss and Rosen (2001), Core et al. (1999), Cyert et al. (1997), Duttaa et al. (2011), Grinstein and Hribar (2004) and Yim (2013). CEOs who work in larger companies thus receive a higher compensation. A reason for this is that being in charge of a larger company comes with more power and responsibilities. Table 5 shows that, on average, an increase of 1% in the company size significantly increases the CEO salary with $1.672 thousand, the CEO cash compensation with $2.291 thousand and the CEO total compensation with $40.246 thousand, keeping everything else constant.

Another company characteristics is the ROA of the acquiring company. The research of Yim (2013) found a negative effect of the ROA on the CEO compensation. However, the relation between the ROA of and the CEO compensation of the acquiring company actually should be positive. This is because a larger ROA indicates a more efficient and profitable company, which should result in a higher level of the CEO compensation. The researches of Bliss and Rosen (2001), Brick et al. (2006), Core et al. (1999) and of Grinstein and Hribar (2004), however, did not find a significant relation between the ROA and the CEO compensation. This research does show a positive effect of the ROA on the CEO compensation and thus contradicts the results found by Yim (2013). Looking at the models ‘a’, ‘b’ and ‘c’ in Table 5, a significantly positive relation between the ROA and all measures of the CEO compensation is shown. On average, an increase of 1% in the ROA increases the CEO salary with $11.897 thousand, the CEO cash compensation with $24.553 thousand and the CEO total compensation with $426.425 thousand, keeping everything else constant. These effects all are significant at the 1% significance level.

This research continues with testing the relation between the governmental characteristics and the level of the CEO compensation. The governmental characteristics used are: whether the CEO also is chairman of the board of directors, the board size, the number of inside directors, the percentage of shares of the acquiring company owned by the CEO, the CEO pay slice and the CEO tenure. All these variables are used to indicate the power of the CEO. At first, the CEO duality is shown. Table 5 shows a significant increase of $83.365 thousand in the CEO salary if the CEO also is the chairman of the board, which is significant at the 1% significance level. Being the chairman of the board results in a more powerful CEO and as a result the CEO can increase his own salary. This is because the board of directors determines the executive compensation. Table 5 also shows a negative relation of the CEO duality on the CEO total compensation. Being the chairman of the board of directors will result in a $2.782 million lower total compensation. The positive relation between the CEO duality and the CEO compensation found in this research is in line with the findings of Brick et al. (2006), Core et al. (1999) and of Grinstein and Hribar (2004). However, the negative effect on the total compensation is much higher. Therefore it can be said that an increase in the power of the CEO is negatively related to an increase in the CEO compensation.

Inside directors also affect the power the CEO has. The more inside directors in the board of directors, the more power a CEO has. This research shows there is a significantly positive relation between the number of inside directors and the CEO total compensation. This is shown in Model 'a' of Table 5. Table 5 shows that an increase in the number of inside directors with one will result in an increase in the CEO total compensation of $1.632 million, which is significant at the 1% significance level. Here it is shown that an increase in the power of the CEO has a positive effect on the CEO total compensation and thus contradicts the results for the CEO duality. A CEO with more power is expected to have a higher compensation because, as already mentioned, the board of directors determines the executive compensation.

The CEO tenure is one of the main CEO characteristics. It can be seen in the Model 'a' of Table 5, there is a significant and positive relation between the both the CEO tenure and the CEO total compensation. No relation was found between CEO tenure and the CEO cash compensation and the CEO salary. The positive relation between CEO tenure and the CEO compensation is in line with the findings of Brick et al. (2006) and Cyert et al. (1997). This makes much sense as a more experienced CEO will get a better contract and the longer the CEO is the CEO of the firm, the more stock options etcetera the CEO will have. And this all results in a higher CEO total compensation.

Table 5: Multivariate CEO compensation regressions

This table shows the multivariate regressions for the three different measures of the CEO compensation. The CEO compensation is the dependent variable in all three models. Model 'a' shows the regression where the CEO total compensation is used as dependent variable, model 'b' shows the regressions where the CEO cash compensation is used as the dependent variable and model 'c' shows the regressions where the CEO salary is used as dependent variable. The company characteristics implemented in the models are: a variable for the size of the acquiring company, the market-to-book ratio and the ROA of the acquiring company. The governmental characteristics implemented in the models are: chairman of the board, the board size of the acquiring company, the number of inside directors, the percentage of shares of the acquiring company owned by the CEO, the CEO tenure and the CEO pay slice measured for the total compensation in model 'a', for the cash compensation in model 'b' and for the salary in model 'c'. Variables representing the deal characteristics in the models are: a variable indicating if the deal is completed or not, diversified, the days between the deal announcement and the completion or withdrawal and the deal value. For all models, the constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Model	*a*	*b*	*c*
Completed	247.175 *(0.19)*	-35.402 *(-0.25)*	-13.255 *(-0.29)*
Deal value	-0.014 *(-0.45)*	0.007** *(2.36)*	0.004*** *(4.00)*
Size	4024.624*** *(14.12)*	229.140*** *(7.33)*	167.151*** *(17.77)*
Market-to-book ratio	0.047* *(1.87)*		
ROA	42,642.520*** *(5.33)*	2455.339*** *(2.92)*	1188.704*** *(4.37)*
Chairman	-2782.475*** *(-3.34)*		83.365*** *(3.00)*
Board size		32.654* *(1.96)*	
Inside directors	1632.018*** *(2.67)*	116.869* *(1.91)*	
% of shares owned	738.006*** *(5.70)*	-5.399 *(-0.41)*	-27.025*** *(-6.42)*
Tenure	245.823*** *(3.58)*		
CEO pay slice	26,091.940*** *(6.59)*	5439.586*** *(10.03)*	1924.824*** *(10.22)*
Diversified	2609.767*** *(2.65)*	258.319** *(2.46)*	118.111*** *(3.49)*
Days between	-9.872*** *(-2.67)*		
Constant	-42,896.210*** *(-12.16)*	-3331.592*** *(-9.02)*	-1267.516*** *(-10.87)*
Adjusted R-squared	0.473	0.345	0.630
N	417	417	418

It is shown in the researches of Core et al. (1999) and Cyert et al. (1997), that the percentage of shares of the acquiring company owned by the CEO negatively affects the CEO compensation. This relation is found for the CEO salary, but this is not the case for the CEO total compensation. Table 5 shows that an increase of 1% in the percentage of shares owned decreases the CEO salary with $270.25, but increases the CEO total compensation with $7.380 thousand, which is significant at the 1% significance level. The increase in power through an increase in the percentage of shares of the acquiring company owned by the CEO thus increases the CEO total compensation. This confirms hypothesis 2.4, which stated that the CEO compensation increases when the percentage of shares owned by the CEO increases.

The CEO pay slice is the last governmental characteristic described in Table 5. An increase in the CEO pay slice results in an increase in the power of the CEO. All three models in Table 5 show a positive effect of the CEO pay slice on the CEO compensation and all effects are significant at the 1% significance level. Table 5 shows that an increase in the CEO pay slice of one increases the CEO salary with $1.924 million, the CEO cash compensation with $5.439 million and the CEO total compensation with $26.091 million. This seems like a lot, but in increase in the CEO pay slice with one is impossible, because the CEO pay slice lies between zero and one. So the CEO pay slice will always increase with a number that is smaller than one. The increase in the CEO pay slice goes hand in hand with an increase in the CEO compensation, because the pay slice is the compensation of the CEO relative to the compensation of the top 5 executives.

All in all, looking at the relation between the CEO compensation and the governmental characteristics, this research shows that an increase in the power of the CEO will result in an increase in the CEO compensation. A high compensation for the CEO thus means that the CEO has more power. If the CEO has more power, this can be used in the contract negotiations. The company does not want to let the CEO go because of his power, but this will most likely comes at the cost of a higher compensation. The power the CEO has within the board of directors is also used in order to negotiate about the executives' personal benefits, such as company shares and options. When these increase this thus results in a higher CEO compensation.

Grinstein and Hribar (2004) found a positive relation between the time to complete a deal and the CEO compensation. This research, on the other hand, shows a negative relation between the CEO total compensation and the time to complete a deal, this is shown in Model 'a' of Table 5. A one day increase in the number of days between the announcement and deal completion decreases the CEO total compensation with $9.872 thousand. A reason could be because the longer it takes the CEO to complete the deal, the lower the compensation for doing the deal will be. The company board of directors prefers a quick deal process over one that takes a lot of time. Because the board of directors determines the CEO compensation, a longer deal process negatively affect the CEO compensation.

4.3 Deal completion

This section describes the deal completion and what company, deal and governmental characteristics might influence this deal completion process. There are univariate and multivariate regressions done. The results from the univariate regressions are shown in Table 6 and the results of the multivariate regressions are shown in Table 7. As already mentioned in the methodology part of this research, both the probit and the logit model are used for the nonlinear regressions, because not one model is better than the other. The result from the probit regressions can be found in the models 'a' and the results for the logit regressions can be found in the models 'b' in both Table 6 and 7.

Hypothesis 3.1 stated that the probability of completing the deal would increase when more value is created for the shareholders of the acquiring company. Looking at the results for the cumulative abnormal return of Model 6 in Panel C of Table 6, it is shown that no significant relation is found between the CAR and the deal completion. It seems that the deal completion is not affected by the level of the cumulative abnormal return in this research. This is not line with findings in earlier researches as well. Chikh and Filbien (2011), Jensen and Ruback (1983), Luo (2005) and Skaife and Wangerin (2013) all found a positive relation between the cumulative abnormal return and the deal completion. Hypothesis 3.1 can neither be confirmed nor rejected, because no significant relation can be found.

Another deal characteristics that is of great importance is the deal value. According to hypothesis 3.2 the deal should be completed more often when the deal is smaller. This suggests that there has to be a negative relation between the deal value and the deal completion. Baker et al. (2012) show the indirect relation between the deal value and the deal completion. They found that a negative relation between the deal completion and the size of the target company. The same relation was found in the research of Aktas et al. (2019). The larger the target company, the larger the deal value would be and this thus indicates a negative relation between the deal value and the deal completion. Looking at the results from Model 1 in Panel C of Table 6, it is shown that the probability of completing the deal decreases when the deal value increases and this is significant at the 1% significance level. For the probit model this means that, on average, an increase of 1% in the deal value will decrease the probability of completing the deal with 1.69 percentage points and for the logit model this means that, on average, an increase of 1% in the deal value will decrease the probability of completing the deal with 1.76 percentage points. Both Models 'a' and 'b' of Table 7 show a negative relation between the deal value and the completion of the deal. A higher deal value will result in a lower probability of completing the deal and this relation is significant at the 1% significance level for all models. Looking at the probit model of Model 1, on average, an increase in the deal value with $1 million will result in a decrease of the probability of completing the deal with $5.19*10^{-4}$ percentage points. The logit model shows a decrease of $4.71*10^{-4}$ percentage, on average, when the deal value increases with $1 million. Hypothesis 3.2 thus is confirmed.

It can be said that there is a negative relation between the deal value and the deal completion. A reason for this is already mentioned in the earlier section of this research. It is much harder to complete a large deal in comparison to a smaller deal.

Another deal characteristic that influences the deal completion process is the price per share paid to the shareholders of the target company. Model 5 of Panel C in Table 6 shows that the price per share paid negatively affects the probability that the deal is completed and this relation is significant at the 5% significance level. This is in line with the findings of the negative relation between the deal value and the deal completion. A higher price per share paid results in a higher total deal value. On average, an increase of one dollar in the price per share paid will result in a decrease of 0.04 percentage points in the probability of completing the deal when looking at the probit model and a decrease of 0.04 percentage points when looking at the logit model as well.

The 52 week high price is a dummy variable dependent on the price per share paid and the maximum stock price of the target company in the past 52 weeks. It is shown in the research of Baker et al. (2012), that the probability of completing the deal increases when the price per share paid in the deal is higher than the 52 week high price of the target company. The same is found in this research. Looking at Model 7 of Panel C in Table 6, it is shown that the relation is positive and significant at the 1% significance level. On average, when the price per share paid is higher than the 52 week high price this will increase the probability of completing the deal with 5.62 percentage points when looking at the probit model and with 5.63 percentage points when looking at the logit model. Models 'a' and 'b' of Table 7 also show a positive relation between the 52 week high dummy variable and the probability of completing the deal and these relations are significant at the 5% significance level for all models. Looking at the probit model, when the price per share paid is higher than the 52 week high price this, on average, increase the probability of completing the deal with 5.45 percentage points. For the logit model, a price per share paid that is higher than the 52 week high price increases the probability of completing the deal with 5.52 percentage when looking at Model 'b' of Table 7. The reason for this positive relation is that the shareholders and the board of directors of the target firm are more willing to accept a bid that is higher than the highest stock price in the last year. This is a reward for the good results in past year.

Looking at the governmental characteristics in Panel B of Table 6, almost no significant relations are shown between the governmental characteristics and the probability of completing the deal. The only relation found is in the logit model of Model 4 of Panel B in Table 6. The relation between the cash compensation and the probability of completing the deal is very small and negative, but this is only significant at the 10% significance level. It can be seen that the relation between the CEO compensation and the deal completion is very small for all measures of the CEO compensation. According to hypothesis 3.3 there should be a positive relation between the level of the CEO compensation and the

Table 6: Univariate nonlinear regressions

This table shows the results of the univariate nonlinear regressions, where the dummy variable completed is the dependent variable. The models 'a' show the regressions where the probit model is used and the models 'b' show the regressions where the logit model is used. Panel A shows the results of the regressions for the following company characteristics: the size of the acquiring company, the natural logarithm of the market value of the acquiring company and the ROA of the acquiring company. Panel B shows the results for the univariate regressions containing the governmental characteristics: chairman of the board, the board size, the CEO total compensation, the CEO cash compensation, the CEO salary and the percentage of shares of the acquiring company owned by the CEO. Panel C shows the results for the univariate regressions with the deal characteristics as independent variables, these are: natural logarithm of the deal value, diversified, tender, the method of payment cash, the price per share paid to the shareholders of the target company, the cumulative abnormal return and at last if the price paid is higher than the targets 52 week high price. For all models, the constant, the pseudo R-squared and the number of observations are shown. The pseudo R-squared is the McFadden's pseudo R-squared, it indicates the relative fit of the model by measuring the ratio of the log likelihood of the full model and intercept model. The higher the R-squared, the better the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Panel A: Company characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
Size	0.008	0.017				
	(0.25)	*(0.26)*				
ln(Market value)			-0.038	-0.074		
			(-1.37)	*(-1.38)*		
ROA					-3.017**	-5.426**
					(-2.32)	*(-2.36)*
Constant	1.187***	2.007***	1.579***	2.781***	1.430***	2.467***
	(4.09)	*(3.50)*	*(6.97)*	*(6.22)*	*(14.35)*	*(12.91)*
Pseudo R-squared	0.000	0.000	0.003	0.003	0.013	0.012
N	883	883	868	686	617	617

Panel B: Governmental characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
Chairman	0.157	0.303				
	(1.08)	*(1.08)*				
Board size			0.029	0.061		
			(1.23)	*(1.26)*		
Total compensation					0.000	0.000
					(0.87)	*(0.84)*
Constant	1.162***	1.967***	0.948***	1.509***	1.169***	1.983***
	(11.80)	*(10.59)*	*(3.88)*	*(3.09)*	*(11.23)*	*(9.93)*
Pseudo R-squared	0.003	0.003	0.004	0.005	0.002	0.002
N	536	536	538	538	536	536

Model	*4*		*5*		*6*	
	a	*b*	*a*	*b*	*a*	*b*
Cash compensation	-0.000	-0.000*				
	(-1.61)	*(-1.65)*				
Salary			-0.000	-0.000		
			(-1.23)	*(1.28)*		
% of shares owned					0.022	0.044
					(0.73)	*(0.69)*

(Table 6 continued)

Constant	1.361*** *(12.69)*	2.332*** *(11.66)*	1.423*** *(8.29)*	2.484*** *(7.48)*	1.215*** *(15.78)*	2.068*** *(13.94)*
Pseudo R-squared	0.007	0.006	0.004	0.004	0.002	0.002
N	536	536	536	536	536	536

Panel C: Deal characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
ln(Deal value)	-0.093*** *(-3.51)*	-0.186*** *(-3.59)*				
Diversified			-0.152 *(-1.09)*	-0.290 *(-1.11)*		
Tender					0.178 *(1.03)*	0.351 *(1.01)*
Constant	1.845*** *(10.01)*	3.345*** *(8.96)*	1.265*** *(21.31)*	2.165*** *(18.79)*	1.218*** *(21.44)*	2.074*** *(19.05)*
Pseudo R-squared	0.019	0.020	0.002	0.002	0.002	0.002
N	974	974	974	974	974	974
Model	*4*		*5*		*6*	
	a	*b*	*a*	*b*	*a*	*b*
Cash	-0.176 *(-1.60)*	-0.337 *(-1.61)*				
Price per share			-0.003** *(-2.18)*	-0.005** *(-2.31)*		
CAR					0.408 *(0.54)*	0.753 *(0.53)*
Constant	1.306*** *(18.88)*	2.244*** *(16.53)*	1.345*** *(19.39)*	2.317*** *(17.34)*	1.241*** *(22.70)*	2.119*** *(20.09)*
Pseudo R-squared	0.004	0.004	0.007	0.007	0.001	0.000
N	974	974	971	971	947	947
Model	*7*					
	a	*b*				
52 week high	0.307*** *(2.84)*	0.590*** *(2.83)*				
Constant	1.078*** *(14.19)*	1.811*** *(12.90)*				
Pseudo R-squared	0.012	0.012				
N	974	974				

probability of completing the deal. This positive relation between the CEO total compensation and the probability of completing the deal indeed is shown in both Models 'a' and 'b' of Table 7. The relation is small but significant at the 5% significance level for all models. For the probit model it is shown that a thousand dollar increase in the CEO total compensation will result in an increase of $5.58*10^{-4}$ percentage points in the probability of completing the deal. When looking at the logit model, a thousand dollar increase in the CEO total compensation will result in an increase of $5.19*10^{-4}$ percentage points in the probability of completing the deal, Model 'b' of Table 7. It thus is shown that there is a positive effect between the CEO compensation and the deal completion. A higher CEO compensation will also result in more power for the CEO and this indirectly means that there is a positive relation between the

power of the CEO and the deal completion as well. This all results in the confirmation of hypothesis 3.3.

According to hypothesis 3.4 there should be a positive relation between the size of the acquiring company and the probability of completing the deal. This positive relation is also found in the earlier researches done by Aktas et al. (2019), Baker et al. (2012) and by Kau et al. (2008). Panel A of Table 6 shows the relation between the probability of completing the deal and the size of the acquiring company and the natural logarithm of the market value of the acquiring company. Looking at the results it can be seen that no significant relation can be found. When doing the multivariate regressions no significant relation between the company size and the deal completion can be found either. The results of this research thus can neither confirm nor reject hypothesis 3.4.

Table 7: Multivariate nonlinear regressions

This table shows the results of the multivariate nonlinear regressions, where the dummy variable completed is the dependent variable. Model 'a' shows the regression where the probit model is used and model 'b' shows the regression where the logit model is used. Model 1 shows the regression including variables for the CEO total compensation, the deal value, if the price per share paid to the shareholders of the target company is higher than the 52 week high price of the target and a variable that represents the percentage of shares of the acquiring company owned by the CEO. For all models, the constant, the pseudo R-squared and the number of observations are shown. The pseudo R-squared is the McFadden's pseudo R-squared, it indicates the relative fit of the model by measuring the ratio of the log likelihood of the full model and intercept model. The higher the R-squared, the better the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Model	*1*	
	a	*b*
Total compensation	$3.37*10^{-5}$**	$5.97*10^{-5}$**
	(2.32)	*(2.18)*
52 week high	0.329**	0.636**
	(2.09)	*(2.11)*
Deal value	$-3.13*10^{-5}$***	$-5.42*10^{-5}$***
	(-4.90)	*(-4.66)*
% of shares owned	0.024	0.041
	(0.73)	*(0.66)*
Constant	0.951***	1.580***
	(6.01)	*(5.39)*
Pseudo R-squared	0.100	0.096
N	536	536

Both the probit and the logit model of Table 7 can answer the research question. The research question was as follows: what is the relation between the deal value, CEO compensation and deal completion within mergers and acquisitions? It thus can be seen from the results of Table 7 that smaller deals and deals done by higher compensated CEOs are completed more often. This means a negative relation

between the deal completion and the deal value and a positive relation between the deal completion and the CEO compensation.

4.4 Cumulative abnormal announcement return of the acquiring company

This research looks into the cumulative abnormal announcement return for the shareholders of the acquiring company. The results are shown in Table 8. On average there is a negative abnormal announcement return of -0.51% and this is significant on a 5% significance level. This negative abnormal announcement return is in line with the earlier research of Fuller et al. (2002). They also found a negative average cumulative abnormal announcement return of -1.00% if the target was a public company. The same negative abnormal announcement return for deals in which the target is a public company is found by the research of Field and Mkrtchyan (2017). The researches of Chikh and Filbien (2011), Datta et al. (1992) and Dodd (1980) also found negative abnormal announcement returns for the shareholders of the acquiring firms. According to hypothesis 4.1 there should be a negative abnormal announcement return for the shareholders of the acquiring company. The findings in Table 8 thus confirm hypothesis 4.1. Table 4 further splits the sample into completed and uncompleted deals. It can be seen that there is a negative average cumulative abnormal announcement return for both the completed and uncompleted sample, however, only the CAR for the completed deals is significant and this is just at a significance level of 10%. The last column of Table 8 shows the result from the t-test which tests the difference in the CAR between the sample with completed and uncompleted deals. It is shown that there is no significant difference.

Table 8: Average cumulative abnormal announcement returns of the acquirer

This table shows the sample average cumulative abnormal announcement returns of the acquiring company for the total sample, the sample containing only completed deals and the sample containing only the uncompleted deals and done for the event-window [-1,+1]. The last column describes the t-test in order to test the null hypothesis that the mean value of the CAR for the completed deals equals the mean value of the CAR for the uncompleted deals. The t-statistics are shown in the second row of the table. The null hypothesis can be significant at a significance level of 10%, 5% and 1%, which is equivalent to *, ** and *** respectively.

	Total	Completed	Uncompleted	Difference
CAR	-0.0051**	-0.0047*	-0.0089	-0.0042
t-statistic	-2.093	-1.770	-1.437	-0.528
N	947	845	102	947

Table 9 shows the results of the regressions using the cumulative abnormal announcement return of the acquiring company as the dependent variable. The univariate and multivariate regressions are used in order to answer the hypotheses 4.2 to 4.4. There should be a negative relation between the size of the acquiring company and the company's abnormal announcement return according to hypothesis 4.2. Looking at the model in Panel B of Table 9, it can be seen that there is no significant relation found between the size of the acquiring company and the abnormal announcement return. The researches done

by Alexandridis et al. (2017), Field and Mkrtchyan (2017), Harford et al. (2012) and the researches of Moeller et al. (2003, 2004) all found negative abnormal announcement returns for the acquiring company. This cannot be confirmed in this research. A reason for this could be because the sample, on average, contains large public acquirers. Therefore, there is no difference in the results for the CAR of these large companies. Hypothesis 4.2 can therefore neither be confirmed nor can it be rejected.

Another company characteristic is the ROE of the acquiring company, included in the model of Panel B in Table 9. The ROE of the acquirer is a measure for the company performance and this negatively affects the abnormal announcement return. An increase of 1% in the ROE decreases the abnormal announcement return with 0.2%, which is significant at the 1% significance level.

According to hypothesis 4.3, there should be a negative relation between the abnormal announcement return of the acquirer and the deal value. However, no relation can be found in this research. Including the deal value in the model resulted in highly insignificant results. Hypothesis 4.3, therefore, can neither be confirmed nor rejected.

A dummy variable for a deal that is financed with cash is included in the model of Panel B in Table 9. It is shown that if the deal is financed with cash, this results in an increase of the abnormal announcement return of the acquiring company with 2.1% compared to when the deal is financed with stocks or a mix of stock and cash. The positive effect of financing a deal with cash is highly significant at the 1% significance level. The positive relation is in line with the findings of Alexandridis et al. (2017), Alexandridis et al. (2013) and of Datta et al. (1992). A reason for the increase in the abnormal announcement return compared to a payment with company stocks could be because there is no dilution of the shares for the shareholders.

Panel A of Table 9 shows the univariate regressions for the governmental characteristics. These variables are used to measure the power of the CEO. It is shown that the CEO pay slice measured for both the salary, Model 1, and the cash compensation, Model 2, negatively affects the abnormal announcement return of the acquiring company. When the CEO pay slice increases, this will increase the power of the CEO. Models 1 and 2 show that if the CEO pay slice for the salary increases with one this will result in a decrease of the abnormal announcement return of the acquirer with 10.9% and an increase of one in the CEO pay slice of the cash compensation reduces the abnormal announcement return of the acquirer with 8.5%. Both effects are highly significant at the 1% significance level. This indirectly shows a negative relation between the power of the CEO and the acquirers' abnormal announcement return. The negative relation is in line with the findings of Bebchuk et al. (2011). They also found a negative relation between the CEO pay slice and the abnormal announcement return.

Another measure for the CEO power is the board size. When the size of the board of directors of the acquiring company increases, this increases the power of the CEO. Model 4 in Panel A of Table 9 shows that an increase of the size of the board negatively affects the abnormal announcement return of the acquirer. When the size of the board increases with one member, this will result in a decrease in the acquirers' abnormal announcement return of 0.2%. The effect thus is negative and is significant at the 5% significance level. The findings in this research contradict the earlier findings of Swanstrom (2006), because he found a positive relation between the size of the board and the abnormal announcement return of the acquirer. It is in line with the earlier findings of this paper that an increase in the CEO power decreases the acquirers' abnormal announcement return.

It is clear that the power of the CEO increases when the percentage of shares of the acquiring company owned by the CEO increases. Model 5 in Panel A of Table 9 shows that this increase in the percentage of shares owned, increases the abnormal announcement return of the acquirer. The effect, however, is very small. This is because a 100% increase in the company shares owned by the CEO only results in a 0.2% increase in the abnormal announcement return. The effect is small, but significant at the 5% significance level. This positive relation is in line with earlier research. Cosh et al. (2006) also found the relation between the percentage of shares owned and the abnormal announcement return to be significantly positive.

The number of inside directors also influences the CEO power. The more inside directors, the more power the CEO has. The relation between the number of inside directors and the abnormal announcement return is positive as well. This is shown in the multivariate regression of Panel B in Table 9. It shows that if the number of inside directors in the board of directors increases with one, this will result in a 1.0% increase in the abnormal announcement return. This effect is significant at the 5% significance level.

According to hypothesis 4.4, there should be a negative relation between the power of the CEO and the abnormal announcement return. Taking the results found in account, an increase in power due to an increase in the CEO pay slice and the size of the board of directors results in a large negative effect for the abnormal announcement returns. An increase in power due to an increase in the percentage of shares owned and the number of inside directors results in a positive effect on the abnormal announcement return, however, this effect is rather small. Therefore, it could be said that hypothesis 4.4 is confirmed. An increase in the power of the CEO negatively affects the abnormal announcement return of the acquirer. As already mentioned in the earlier chapter, the CEO power highly affects the completion of the deal. When a CEO has more power, the rest of the board of directors is not needed in order to complete a deal. The CEO will push through the deal due to personal believes and benefits the CEO has from completing the deal. Even bad deals will be pushed through and this is why a larger CEO power

Table 9: Cumulative abnormal return regressions of the acquirer

This table shows several regression models, all in which the cumulative abnormal return is the dependent variable, for the event-window [-1,+1]. Models 1 to 5 of Panel A represent the univariate regression models of one independent variable on CAR, where the independent variable is a governmental characteristic. Model 1 and 2 include different measures for the CEO pay slice variable. Model 3 includes a dummy variable that indicates if the CEO also is chairman of the board in the regression. Model 4 shows a regression including the variable for the size of the board of directors. Model 5 shows the regression using a variable that indicates the percentage of company shares owned by the CEO. Panel B shows the multivariate regression for the dependent variable CAR. The model of Panel B includes 4 variables. A variable for the size of the acquiring company, a variable that indicates if the deal is paid in cash, the ROE of the acquiring company and a variable indicating the number of inside directors. For all models, the constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

	Panel A					Panel B
Model	*1*	*2*	*3*	*4*	*5*	
Size						-0.001 *(-0.78)*
CEO pay slice, salary	-0.109*** *(-3.09)*					
CEO pay slice, cash compensation		-0.085*** *(-2.73)*				
Chairman			-0.002 *(-0.28)*			
Board size				-0.002** *(-2.12)*		
% of shares owned					0.002** *(2.23)*	
Cash						0.021*** *(3.51)*
ROE						-0.186*** *(-3.93)*
Inside directors						0.010** *(2.45)*
Constant	0.031*** *(2.63)*	0.023** *(2.22)*	-0.004 *(-0.91)*	0.014 *(1.50)*	-0.006** *(-2.21)*	-0.006 *(-0.34)*
Adjusted R-squared	0.016	0.012	-0.002	0.007	0.007	0.071
N	534	534	534	535	534	416

results in a more negative abnormal announcement return. A more powerful CEO is more disliked by the shareholders of the acquiring company as well. The shareholders will have less influence when making decisions. This again will negatively affects the market price of the acquiring company, resulting in a more negative abnormal announcement return for the acquiring company.

5. Conclusion

This research examines what the effects of the deal value and CEO compensation are on the completion of the deal in mergers and acquisitions. This question is answered based on a research of 974 mergers and acquisitions from January 2011 until December 2018, where both the target and the acquirer are US public companies. Out of the deals 869 are completed and 105 are uncompleted. The results show that there is a negative effect between the deal value and the deal completion. This is what was expected, because a smaller deal is easier to make and large deals bring a lot of responsibilities and strict rules with them. It is more difficult to integrate an already large company into another company. It is also found that the CEO compensation positively affects the deal completion. This was expected as well. A reason for this could be that the CEO is more willing to work hard in order to make the deal succeed, because the CEO itself will profit from the deal as well in terms of a higher compensation.

In order to see how the effects are build up, the research is split up into the investigation of the deal value, the CEO compensation, the deal completion itself and an investigation of the abnormal announcement return of the acquiring company.

The deal value is affected by the size of the acquiring companies. Larger acquiring companies are involved in lager deals. Larger companies will have more money to invest and will therefore be involved in larger deals. Larger companies are also more willing to take over companies that may become competitors in the future. This will result in more growth for the company. Larger companies can also spend more money in order to integrate both companies. If a company is larger, the company will have a larger revenue or sales. More sales lead to more money available for investments and this result in the positive relation between the sales of the acquiring company and the deal value. The price per share paid to the shareholders of the target company is included in the total deal value. Therefore, it is logical that the price per share paid to the shareholders of the target company is positively related to the deal value. One of the most influential characteristics is the deal completion. This research shows a negative relation between the deal completion and the deal value. Completed deals have a smaller deal value compared to uncompleted deals. Smaller deals are easier to complete because there is a lot a stake when doing a large deal and this is less in smaller deals. It is also shown that there is a positive relation between the number of days between the announcement date and the deal completion or rejection and the deal value. This can be explained by the fact that it takes more time to overthink a deal of a higher value. A deal characteristic that influences the deal value, is the method of payment. A deal financed with cash will result in a lower deal value compared to a deal financed using company stocks or a mix of cash and stocks. A deal financed with stocks is most of the time done by overvalued companies using overvalued stocks in order to finance the deal. This may result in a higher deal value than a deal financed with cash. The deal value is also positively affected by the CEO cash compensation. A reason could be that the

bonus of the CEO when, for instance, completing the deal will result in this higher deal value. An increase in the number of inside directors will increase the power of the CEO and will decrease the deal value. This shows a negative relation between the power of the CEO and the deal value and this relation is larger than the positive relation between the power of the CEO and the deal value as measured by the CEO cash compensation. It thus seems there is a negative relation between the power of the CEO and the deal value.

The CEO compensation can be explained by various company, governmental and deal characteristics as well. Looking at the size of the acquiring company, it is shown that this has a positive relation with the CEO compensation. This means that being the CEO of a large company will result in a higher compensation. If the company operates more efficient and is more profitable, this should result in a higher CEO compensation as well. This is because the firm is well run by the CEO. This indeed is confirmed in this research. A larger ROA indicates a more efficient and profitable company and this research shows a positive relation between the ROA and the CEO compensation. There are governmental characteristics that also show significant relations with the CEO compensation. For instance, if the CEO is chairman of the board of directors as well, this will lead to a decrease in the CEO total compensation. Being the chairman increases the power of the CEO and it can therefore be said that an increase in power is negatively related to an increase in the CEO compensation. Now looking at the board of directors, if the board of directors contains more inside directors this will result in a higher level of CEO power. There is a positive relation between the number of inside directors and the CEO total compensation. If the CEO now owns a larger percentage of the shares of the acquiring company, this will increase the CEO power as well. This research shows that an increase in the percentage of shares owned by the CEO results in a decrease of the CEO salary, but in an increase in the CEO total compensation. This is due to the personal benefits the CEO has. Having more shares will result in a larger return for the CEO when the company performs well. The CEO compensation determines the level of the CEO pay slice and it is shown in this research that there is a positive relation between the CEO pay slice and the CEO compensation, which is a logical result of the dependence of the two. An increase in the CEO pay slice increases the power of the CEO as well. It can be seen from all the governmental characteristics that an increase in the power of the CEO will result in a higher CEO total compensation. A CEO characteristics not yet discussed is the CEO tenure. This research shows a positive relation between the tenure of the CEO and the CEO total compensation. This is because a CEO with more tenure is already working at the company for a longer time. Therefore, the CEO will have a better negotiated contract and receives a higher compensation. Moving on to the relation of some deal characteristics and the CEO compensation, it is shown that there is negative relation between the number of days to complete or reject a deal and the CEO total compensation. Meaning that if the deal completion or rejection process takes more time this will result in a smaller CEO total compensation. A CEO would therefore want the process to go as quick and smooth as possible. If the CEO manages to do a deal which

will diversify the company, a higher compensation is paid out to the CEO. Diversifying will lead to a broader company with possibly more growth potential and this could be an explanation for the higher level of the CEO compensation. Lastly, it is more lucrative for a CEO to undertake large deals. A higher deal value will result in a higher CEO compensation. This is probably due to higher bonuses that are laid out for the CEO when doing the deal.

Earlier research showed a positive relation between the abnormal announcement return of the acquirer and the probability of completing the deal. This relation, however, could not be confirmed in this research. No relation between the abnormal announcement return of the acquirer and the deal completion can be found. This research does find a relation between the deal value and the probability of completing a deal. Completing a deal of a higher value is much harder and it is indeed shown that the deal value is negatively related to the probability of completing the deal. The probability of completing the deal thus decreases when the deal value increases. The price per share paid to the shareholders of the target company negatively affects the probability of completing the deal as well. This is in line with the findings of the negative relation between the deal value and the deal completion. A higher price per share paid to the shareholders of the target company results in a higher total deal value and this can explain the negative relation between the price per share paid and the probability of completing the deal. On the other hand, this research finds that when the price per share paid to the shareholders of the target company is higher than the 52 week high price of the target, this will increase the probability of completing the deal. The shareholders of the target company are more willing to accept the deal in this case, because they will get a higher value for their shares than what the market would give them. The relation between the CEO compensation and the deal completion is small but positive. It is shown, in this research that an increase in the CEO compensation will lead to a higher probability of completing the deal. A higher CEO compensation will also result in more power for the CEO and this indirectly means that there is a positive relation between the power of the CEO and the deal completion. There are some company characteristics that influence the deal completion process as well. There is a decrease in the probability of completing a deal when there is an increase in the ROA. All in all it can be concluded that smaller deals, with a price per share paid that is higher than the 52 week high price and done by higher compensated CEOs will be completed more often.

Looking at the complete sample, it is found that there is a negative abnormal announcement return for the acquiring company when a deal between two public US companies is done. Splitting the sample into completed and uncompleted deals, it can be found that there is no significant difference between the abnormal announcement return for the completed and uncompleted deals, for the acquiring company. According to this research, the announcement effect can be explained by various company, deal and governmental characteristics. It is shown that the abnormal announcement return of the acquiring company is negatively affected by the acquiring company's ROE. The ROE is a measure for the

company performance and this negatively affects the acquirers' abnormal announcement return. It was expected that the value of the deal would have influenced the abnormal announcement return of the acquirer as well, however, no relation between the acquirers' abnormal announcement return and the deal value was found. Earlier researches all showed that a deal financed with cash resulted in a higher abnormal announcement return for the acquiring company compared to a deal financed with stocks. A reason for this could be that there is no dilution of the shares for the shareholders of the acquiring company. This is confirmed in this research as well. A positive relation is found between the abnormal announcement return of the acquirer and a deal financed with cash. Another part of this subtopic was to investigate how the power of the CEO relates to the acquirers' abnormal announcement return. The CEO pay slice is positively related to the power of the CEO. It is found that the CEO pay slice is negatively related to the abnormal announcement return as well. When the size of the board of directors increases, this increases the power of the CEO as well. This research shows that an increase of the board size is negatively related to the abnormal announcement return. Other characteristics that increase the power of the CEO are the percentage of company shares held by the CEO and the number of inside directors on the board of directors. This research shows a positive relation between these two characteristics and the abnormal announcement return. In the end, taken all the effects together it can be said that an increase in the power of the CEO negatively affects the abnormal announcement return. This is because a more powerful CEO does not need the approval of the board of directors in order to undertake a deal. More powerful CEOs will push through the deals in order to increase their personal compensation. As a result they will push through deals that are bad for the company as well and this may cause the negative abnormal announcement return for the acquiring company.

A suggestion for future research would be to include both public and private companies as a target in mergers and acquisitions. This can shed light on the differences between these public and private targets. It could for instance be the case that the abnormal announcement return for private target companies is positive. Another interesting thing would be to see the influence of cross border mergers and acquisitions. An insight in the difference between cross border and domestic deals can be given by including target companies outside the US. When this research is followed-up in the future, it is again useful to make use of the most recent available data. It can be useful to make some slight changes in the methodology. When doing the event-study, one can for instance make use of a different model than the market model on order to control for effects such as the size, value and momentum effect.

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Appendix A

Table 10: Univariate regressions for the deal value

This table shows the univariate regressions where, in all models, the deal value is the dependent variable. Panel A shows the regressions including the deal characteristics: price per share paid, diversified, the number of days between the deal announcement and completion or withdrawal, if the deal is a tender offer, the methods of payment cash, stock and a mix of the two, if the price paid is higher than the targets 52 week high price, if the deal is completed or not and the CAR. Panel B shows the regressions including the company characteristics of the acquiring company: the company size, the market value, the market-to-book ratio, the ROA and ROE, the company sales, the research and development intensity, the net income, the book value of equity and Tobin's Q. Panel C shows the regressions including the governmental characteristics of the acquiring company: the CEO total compensation, the CEO cash compensation, the CEO Salary, the age of the CEO, the gender of the CEO, the CEO pay slice measured by the total compensation, cash compensation and the salary, the CEO tenure, the percentage of inside directors on the board of directors, whether the CEO is chairman of the board of directors, the size of the board and the percentage of shares of the acquiring company owned by the CEO. For all models, the constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Panel A: Deal characteristics					
Model	*1*	*2*	*3*	*4*	*5*
Price per share	142.767***				
	(18.40)				
Diversified		222.718			
		(0.23)			
Days between			25.790***		
			(7.64)		
Tender				-1181.099	
				(-1.10)	
Cash					-2339.323***
					(-3.15)
Constant	-1072.269***	3616.187***	-175.982	3801.469***	4488.131***
	(-2.67)	*(9.25)*	*(-0.29)*	*(9.94)*	*(10.11)*
Adjusted R-squared	0.258	-0.001	0.056	0.000	0.009
N	971	974	974	974	974
Model	*6*	*7*	*8*	*9*	*10*
Stock	-1501.503*				
	(-1.87)				
Mix		3584.834***			
		(4.89)			
52 week high			1508.322**		
			(2.09)		
Completed				-7445.021***	
				(-6.59)	
CAR					-2816.179
					(-0.58)
Constant	4062.377***	2327.326***	2794.400***	10,294.740***	3720.813***
	(9.70)	*(5.23)*	*(5.14)*	*(9.65)*	*(10.10)*
Adjusted R-squared	0.003	0.023	0.004	0.042	-0.001
N	974	974	974	974	947

(Table 10 continued)

Panel B: Company characteristics					
Model	*1*	*2*	*3*	*4*	*5*
Size	2420.758*** *(11.36)*				
Market value		0.078*** *(10.80)*			
Market-to-book ratio			0.092** *(2.51)*		
ROA				19,786.820* *(1.83)*	
ROE					-13,436.540 *(-1.55)*
Constant	-17,155.070*** *(-9.18)*	2104.818*** *(5.59)*	3942.019*** *(8.76)*	3619.917*** *(4.91)*	5374.163*** *(7.08)*
Adjusted R-squared	0.127	0.118	0.007	0.004	0.002
N	883	868	726	617	613
Model	*6*	*7*	*8*	*9*	*10*
Sales	0.157*** *(9.34)*				
R&D intensity		-15,532.670 *(-1.20)*			
Net income			0.789*** *(5.57)*		
Book value				0.601** *(2.31)*	
Tobin's Q					1006.441** *(2.56)*
Constant	2465.191*** *(5.25)*	6511.060*** *(5.64)*	3480.988*** *(6.40)*	3998.727*** *(8.93)*	2146.283*** *(3.02)*
Adjusted R-squared	0.101	0.001	0.047	0.006	0.006
N	722	314	617	726	883
Panel C: Governmental characteristics					
Model	*1*	*2*	*3*	*4*	*5*
Total compensation	0.225*** *(3.95)*				
Cash compensation		3.428*** *(5.90)*			
Salary			11.625*** *(9.32)*		
Age				246.642** *(2.49)*	
Gender					383.679 *(0.13)*
Constant	3006.689*** *(3.81)*	1124.164 *(1.27)*	-6093.231*** *(-4.61)*	-8911.255 *(-1.57)*	4747.708 *(1.63)*
Adjusted R-squared	0.027	0.060	0.138	0.010	-0.002
N	536	536	536	536	536
Model	*6*	*7*	*8*	*9*	*10*
CEO pay slice, total compensation	-4087.503 *(-0.76)*				
CEO pay slice, cash compensation		-2029.931 *(-0.31)*			

(Table 10 continued)

CEO pay slice, salary			-2650.216 *(-0.35)*		
Tenure				-0.082 *(-0.00)*	
% of insiders					-2429.619 *(-0.52)*
Constant	6809.885*** *(2.95)*	5768.103*** *(2.63)*	5964.461** *(2.41)*	5116.259*** *(5.70)*	5531.755*** *(5.62)*
Adjusted R-squared	-0.001	-0.002	-0.002	-0.002	-0.001
N	536	536	536	536	535
Model	*11*	*12*	*13*		
Chairman	1785.416 *(1.52)*				
Board Size		427.279** *(2.19)*			
% of shares owned			-49.763 *(-0.27)*		
Constant	4226.262*** *(5.09)*	810.591 *(0.40)*	5169.204*** *(8.30)*		
Adjusted R-squared	0.002	0.007	-0.002		
N	536	538	536		

Appendix B

Table 11: Univariate CEO compensation regressions

This table contains the results of the univariate regressions, where the CEO compensation is the dependent variable. The models 'a' show the regressions where the CEO total compensation is used as dependent variable, the models 'b' show the regressions where the CEO cash compensation is used as the dependent variable and the models 'c' show the regressions where the CEO salary is used as dependent variable. Panel A shows the results of the regressions for the following company characteristics of the acquiring company: the natural logarithm of the size of company, Tobin's Q, the market value, the ROA and the ROE, the company sales, the research and development intensity, the net income, the book value of the company and the market-to-book ratio. Panel B shows the results for the univariate regressions containing the governmental characteristics of the acquiring company: chairman of the board, the board size, the number of inside directors, the CEO age and tenure, the percentage of company shares owned by the CEO, the percentage of inside directors and the CEO pay slice measured for the total compensation in the models 'a', for the cash compensation in the models 'b' and for the salary in the models 'c' the CEO gender. Panel C shows the results for the univariate regressions using the deal characteristics as independent variables, these are: the cumulative abnormal return, the deal completion, the days between the deal announcement and the completion or withdrawal, diversified, the price per share paid, tender, the methods of payment cash, stock or a mix of the two and the deal value. For all models, the constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Panel A: Company characteristics

Model	*1*			*2*		
	a	*b*	*c*	*a*	*b*	*c*
ln(Size)	3199.347*** *(13.11)*	222.930*** *(8.81)*	168.153*** *(17.48)*			
Tobin's Q				1791.493*** *(3.76)*	65.621 *(1.41)*	38.467* *(1.86)*
Constant	-19,797.240*** *(-8.77)*	-867.739*** *(-3.71)*	-568.496*** *(-6.39)*	6390.120*** *(7.07)*	1055.321*** *(11.97)*	900.351*** *(22.96)*
Adjusted R-squared	0.242	0.125	0.363	0.024	0.002	0.005
N	536	536	536	536	536	536
Model	*3*			*4*		
	a	*b*	*c*	*a*	*b*	*c*
Market value	0.066*** *(9.52)*	0.004*** *(6.14)*	0.003*** *(9.27)*			
ROA				39,704.780*** *(3.75)*	1274.349 *(1.25)*	724.106 *(1.63)*
Constant	7569.881*** *(16.62)*	1041.213*** *(22.92)*	888.963*** *(45.28)*	7798.427*** *(9.77)*	1123.656*** *(14.61)*	952.892*** *(28.49)*
Adjusted R-squared	0.146	0.065	0.139	0.030	0.001	0.004
N	526	526	526	418	418	418
Model	*5*			*6*		
	a	*b*	*c*	*a*	*b*	*c*
ROE	2831.839 *(0.34)*	-237.274 *(-0.30)*	-91.214 *(-0.26)*			
Sales				0.111*** *(7.32)*	0.009*** *(6.38)*	0.007*** *(11.20)*
Constant	9919.143*** *(13.37)*	1211.043*** *(17.18)*	1000.724*** *(32.61)*	8224.143*** *(15.82)*	1041.416*** *(21.05)*	883.010*** *(42.52)*

(Table 11 continued)

Adjusted R-squared	-0.002	-0.002	-0.002	0.100	0.078	0.209
N	417	417	417	472	472	472
Model		*7*			*8*	
	a	*b*	*c*	*a*	*b*	*c*
R&D intensity	-33,591.950**	-5194.952***	-2905.045***			
	(-2.01)	*(-3.35)*	*(-5.35)*			
Net income				0.964***	0.055***	0.041***
				(8.26)	*(4.77)*	*(8.56)*
Constant	13,935.960***	1541.097***	1178.850***	8239.128***	1091.151***	916.313***
	(11.51)	*(13.70)*	*(29.85)*	*(15.31)*	*(20.34)*	*(41.40)*
Adjusted R-squared	0.012	0.040	0.101	0.139	0.050	0.148
N	247	247	247	418	418	418
Model		*9*			*10*	
	a	*b*	*a*	*a*	*b*	*c*
Book value	0.263	0.121***	0.021*			
	(1.06)	*(5.31)*	*(1.94)*			
Market-to-book ratio				0.139***	0.007**	0.005***
				(4.35)	*(2.26)*	*(3.93)*
Constant	9915.302***	1155.496***	983.875***	9575.994***	1164.227***	973.153***
	(20.24)	*(25.77)*	*(47.05)*	*(19.69)*	*(25.08)*	*(46.30)*
Adjusted R-squared	0.000	0.055	0.006	0.037	0.009	0.030
N	472	472	472	472	472	472
Panel B: Governmental characteristics						
Model		*1*			*2*	
	a	*b*	*c*	*a*	*b*	*c*
Chairman	1319.653	265.405***	182.104***			
	(1.50)	*(3.15)*	*(4.91)*			
Board size				169.348	67.369***	43.296***
				(1.15)	*(4.85)*	*(7.18)*
Constant	8707.645***	1032.082***	873.517***	7685.233***	488.877***	530.837***
	(14.02)	*(17.34)*	*(33.37)*	*(5.01)*	*(3.37)*	*(8.41)*
Adjusted R-squared	0.002	0.016	0.041	0.001	0.041	0.086
N	536	536	536	535	535	535
Model		*3*			*4*	
	a	*b*	*c*	*a*	*b*	*c*
Inside directors	1666.989***	-27.858	-72.694***			
	(2.71)	*(-0.47)*	*(-2.75)*			
Age				191.318***	-1.836	4.399
				(2.58)	*(-0.26)*	*(1.37)*
Constant	6827.205***	1206.700***	1074.898***	-1515.474	1268.707***	714.064***
	(6.60)	*(12.02)*	*(24.19)*	*(-0.36)*	*(3.08)*	*(3.90)*
Adjusted R-squared	0.012	-0.002	0.012	0.011	-0.002	0.002
N	536	536	536	536	536	536
Model		*5*			*6*	
	a	*b*	*c*	*a*	*b*	*c*
Tenure	268.884***	-3.957	-4.441			
	(4.09)	*(-0.61)*	*(-1.55)*			
% of shares owned				1023.028***	-47.386***	-39.467***
				(7.72)	*(-3.56)*	*(-6.85)*
Constant	7321.789***	1194.356***	997.972***	8263.821***	1215.296***	1006.771***
	(11.06)	*(18.43)*	*(34.62)*	*(18.70)*	*(27.35)*	*(52.42)*
Adjusted R-squared	0.029	-0.001	0.003	0.099	0.021	0.079
N	536	536	536	536	536	536

(Table 11 continued)

Model	*7*			*8*		
	a	*b*	*c*	*a*	*b*	*c*
CEO pay slice	11,774.540*** *(2.94)*	4231.469*** *(9.67)*	1647.656*** *(7.15)*			
% of insiders				2499.760 *(0.72)*	-911.837*** *(-2.73)*	-807.780*** *(-5.54)*
Constant	4484.535*** *(2.61)*	-195.797 *(-1.34)*	436.511*** *(5.75)*	8960.104*** *(12.17)*	1318.165*** *(18.67)*	1101.268*** *(35.76)*
Adjusted R-squared	0.014	0.147	0.086	-0.001	0.012	0.053
N	536	536	536	535	535	535

Model	*9*		
	a	*b*	*c*
Gender	-7131.542*** *(-3.24)*	-20.305 *(-0.09)*	-184.491* *(-1.94)*
Constant	16,203.840*** *(7.52)*	1183.67*** *(5.64)*	1141.148*** *(12.24)*
Adjusted R-squared	0.017	-0.002	0.005
N	536	536	536

Panel C: Deal characteristics

Model	*1*			*2*		
	a	*b*	*c*	*a*	*b*	*c*
CAR	294.386 *(0.04)*	-756.416 *(-1.13)*	-343.554 *(-1.15)*			
Completed				1184.382 *(0.83)*	-233.817* *(-1.71)*	-78.242 *(-1.28)*
Constant	9357.236*** *(21.09)*	1160.264*** *(27.14)*	961.241*** *(50.54)*	8308.788*** *(6.20)*	1372.805*** *(10.64)*	1034.004*** *(17.97)*
Adjusted R-squared	-0.002	0.001	0.001	-0.001	0.004	0.001
N	534	534	534	536	536	536

(Table 6 continued)

Model	*3*			*4*		
	a	*b*	*c*	*a*	*b*	*c*
Days between	-0.153 (-0.04)	0.389 *(1.07)*	0.491*** *(3.08)*			
Diversified				739.898 *(0.62)*	230.091** *(2.01)*	66.262 *(1.30)*
Constant	9387.692*** *(13.25)*	1106.874*** *(16.21)*	891.491*** *(29.54)*	9243.534*** *(19.17)*	1126.513*** *(24.29)*	953.350*** *(46.05)*
Adjusted R-squared	-0.002	0.001	0.016	-0.001	0.006	0.001
N	536	536	536	536	536	536

Model	*5*			*6*		
	a	*b*	*c*	*a*	*b*	*c*
Price per share	41.612*** *(4.49)*	4.433*** *(4.98)*	3.256*** *(8.58)*			
Tender				4167.918*** *(3.67)*	54.996 *(0.50)*	59.516 *(1.21)*
Constant	7728.900*** *(13.55)*	989.568*** *(18.05)*	835.861*** *(35.75)*	8618.517*** *(17.93)*	1154.439*** *(24.59)*	953.569*** *(45.64)*
Adjusted R-squared	0.035	0.043	0.120	0.023	-0.001	0.001
N	534	534	534	536	536	536

(Table 11 continued)

Model	*7*			*8*		
	a	*b*	*c*	*a*	*b*	*c*
Cash	3917.960*** *(4.49)*	-6.390 *(-0.07)*	67.709* *(1.78)*			
Stock				-4754.221*** *(-4.29)*	-208.927* *(-1.93)*	-139.333*** *(-2.90)*
Constant	7654.557*** *(13.27)*	1167.079*** *(20.59)*	934.669*** *(37.12)*	10,260.860*** *(21.32)*	1203.658*** *(25.57)*	990.484*** *(47.44)*
Adjusted R-squared	0.035	-0.002	0.004	0.032	0.005	0.014
N	536	536	536	536	536	536
Model	*9*			*10*		
	a	*b*	*c*	*a*	*b*	*c*
Mix	-1009.842 *(-1.11)*	143.028 *(1.63)*	19.852 *(0.51)*			
Deal value				0.126*** *(3.95)*	0.018*** *(5.90)*	0.012*** *(9.32)*
Constant	9743.700*** *(17.49)*	1110.654*** *(20.69)*	956.784*** *(39.91)*	8719.897*** *(18.78)*	1072.861*** *(24.36)*	902.693*** *(48.06)*
Adjusted R-squared	0.000	0.003	-0.001	0.027	0.060	0.138
N	536	536	536	536	536	536

Appendix C

Table 12: Univariate nonlinear regressions not included in the main text

This table shows the results of the univariate nonlinear regressions, where the dummy variable completed is the dependent variable. The models 'a' show the regressions where the probit model is used and the models 'b' show the regressions where the logit model is used. Panel A shows the results of the regressions for the following company characteristics of the acquiring company: the market-to-book ratio, the ROE, the company sales, the research and development intensity, the net income, the natural logarithm of the company book value and Tobin's Q. Panel B shows the results for the univariate regressions containing the governmental characteristics of the acquiring company: The CEOs age, gender and tenure, the percentage of shares of the acquiring company owned by the CEO, the three different measures for the CEO pay slice, the number and the percentage of inside directors on the board of directors. Panel C shows the results for the univariate regressions with the deal characteristics as independent variables, these are: the methods of payment stock and mix and the number of days between the deal announcement and the deal completion or withdrawal. For all models, the constant, the pseudo R-squared and the number of observations are shown. The pseudo R-squared is the McFadden's pseudo R-squared, it indicates the relative fit of the model by measuring the ratio of the log likelihood of the full model and intercept model. The higher the R-squared, the better the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Panel A: Company characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
Market-to-book ratio	-0.000	-0.000				
	(-0.05)	*(-0.05)*				
ROE			-0.479	-0.913		
			(-0.45)	*(-0.46)*		
Sales					-0.000	-0.000
					(-0.44)	*(-0.44)*
Constant	1.226***	2.090***	1.297***	2.227***	1.249***	2.134***
	(19.56)	*(17.40)*	*(13.15)*	*(11.77)*	*(18.29)*	*(16.24)*
Pseudo R-squared	0.000	0.000	0.001	0.001	0.000	0.000
N	726	726	613	613	722	722
Model	*4*		*5*		*6*	
	a	*b*	*a*	*b*	*a*	*b*
RD intensity	-1.60	-3.084				
	(-1.36)	*(-1.49)*				
Net income			-0.000	-0.000		
			(-0.88)	*(-0.90)*		
ln(Book value)					0.063	0.132
					(1.26)	*(1.28)*
Constant	1.255***	2.151***	1.292***	2.216***	1.056***	1.736***
	(10.60)	*(9.59)*	*(17.56)*	*(15.52)*	*(7.18)*	*(5.93)*
Pseudo R-squared	0.008	0.008	0.002	0.002	0.003	0.004
N	314	314	617	617	726	726
Model	*7*					
	a	*b*				
Tobin's Q	-0.073	-0.131				
	(-1.35)	*(-1.36)*				
Constant	1.372***	2.359***				
	(13.31)	*(12.24)*				
Pseudo R-squared	0.003	0.003				
N	883	883				

(Table 12 continued)

Panel B: Governmental characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
Age	-0.000	-0.000				
	(-0.01)	*(-0.01)*				
Tenure			0.001	0.002		
			(0.10)	*(0.10)*		
Gender					-0.103	-0.201
					(-0.27)	*(-0.27)*
Constant	1.243*	2.124	1.228***	2.093***	1.335***	2.303***
	(1.82)	*(1.58)*	*(11.22)*	*(9.88)*	*(3.56)*	*(3.10)*
Pseudo R-squared	0.000	0.000	0.000	0.000	0.000	0.000
N	536	536	536	536	536	536
Model	*4*		*5*		*6*	
	a	*b*	*a*	*b*	*a*	*b*
CEO pay slice, total compensation	-0.361	-0.709				
	(-0.55)	*(-0.55)*				
CEO pay slice, cash compensation			-1.174	-2.263		
			(-1.43)	*(-1.45)*		
CEO pay slice, salary					-1.242	-2.435
					(-1.25)	*(-1.26)*
Constant	1.387***	2.406***	1.620***	2.852***	1.640***	2.903***
	(4.85)	*(4.31)*	*(5.77)*	*(5.27)*	*(4.94)*	*(4.44)*
Pseudo R-squared	0.001	0.001	0.006	0.006	0.005	0.005
N	536	536	536	536	536	536
Model	*7*		*8*			
	a	*b*	*a*	*b*		
Inside directors	-0.033	-0.064				
	(-0.33)	*(-0.33)*				
% of insiders			-0.313	-0.540		
			(-0.59)	*(-0.58)*		
Constant	1.286***	2.207	1.289***	2.200***		
	(7.61)	*(6.74)*	*(11.03)*	*(10.24)*		
Pseudo R-squared	0.000	0.000	0.001	0.001		
N	536	536	535	535		

Panel C: Deal characteristics

Model	*1*		*2*		*3*	
	a	*b*	*a*	*b*	*a*	*b*
Stock	0.167	0.325				
	(1.33)	*(1.31)*				
Days between			-0.000	-0.001		
			(-0.81)	*(-0.90)*		
Mix					0.043	0.084
					(0.39)	*(0.39)*
Constant	1.196***	2.032***	1.295***	2.240***	1.223***	2.083***
	(19.40)	*(17.31)*	*(14.64)*	*(12.61)*	*(18.24)*	*(16.20)*
Pseudo R-squared	0.003	0.003	0.001	0.001	0.000	0.000
N	974	974	974	974	974	974

Appendix D

Table 13: Univariate cumulative abnormal return regressions for the acquiring company

This table shows the univariate regressions where, in all models, the cumulative abnormal return, of the acquiring company and event-window [-1,+1], is the dependent variable. Panel A shows the regressions including the deal characteristics: price per share paid, diversified, the number of days between the deal announcement and completion or withdrawal, if the deal is a tender offer, the methods of payment cash, stock and a mix of the two, if the price paid is higher than the targets 52 week high price, the natural logarithm of the deal value and if the deal is completed or not. Panel B shows the regressions including the company characteristics of the acquiring company: the natural logarithm of the size, the market value, the market-to-book ratio, the ROA and ROE, the company sales, the research and development intensity, the net income, the book value of equity and Tobin's Q. Panel C shows the regressions including the governmental characteristics of the acquiring company: the CEO total compensation, the CEO cash compensation, the CEO Salary, the age of the CEO, the gender of the CEO, the CEO pay slice measured by the total compensation, the CEO tenure and the percentage of inside directors on the board of directors. For all models, the constant, the adjusted R-squared and the number of observations are shown. The adjusted R-squared indicates the relative fit of the model and only increases if an added term improves the model. The t-statistics are shown in brackets below the coefficients. The coefficients can be significant at the 10%, 5% and 1% significance levels, indicated with *, ** and *** respectively.

Panel A: Deal characteristics					
Model	*1*	*2*	*3*	*4*	*5*
Price per share	-0.000 *(-0.43)*				
Diversified		-0.002 *(-0.25)*			
Days between			0.000 *(0.34)*		
Tender				0.005 *(0.65)*	
Cash					0.019*** *(3.80)*
Constant	-0.004 *(-1.29)*	-0.005* *(-1.81)*	-0.006 *(-1.48)*	-0.006** *(-2.19)*	-0.012*** *(-3.96)*
Adjusted R-squared	-0.001	-0.001	-0.001	-0.001	0.014
N	944	947	947	947	947
Model	*6*	*7*	8	9	10
Stock	-0.008 *(-1.48)*				
Mix		-0.012** *(-2.38)*			
52 week high			0.000 *(0.01)*		
ln(Deal value)				-0.001 *(-0.46)*	
Completed					0.004 *(0.53)*
Constant	-0.003 *(-1.02)*	-0.001 *(-0.20)*	-0.005 *(-1.38)*	-0.002 *(0.84)*	-0.009 *(-1.19)*
Adjusted R-squared	0.001	0.005	-0.001	-0.001	-0.001
N	947	947	947	947	947

(Table 13 continued)

Panel B: Company characteristics					
Model	*1*	*2*	*3*	*4*	*5*
ln(Company size)	0.001 *(0.48)*				
Market value		0.000 *(0.46)*			
Market-to-book ratio			-0.000 *(-0.41)*		
ROA				0.019 *(0.34)*	
ROE					-0.169*** *(-3.74)*
Constant	-0.011 *(-1.01)*	-0.007*** *(-2.72)*	-0.006*** *(-2.12)*	-0.007* *(-1.69)*	0.005 *(1.23)*
Adjusted R-squared	-0.001	-0.001	-0.001	-0.002	0.021
N	859	844	709	606	602
Model	*6*	*7*	*8*	*9*	*10*
Sales	-0.000 *(-0.22)*				
R&D intensity		-0.068 *(-1.10)*			
Net income			-0.000 *(-0.08)*		
Book value				-0.000 *(-1.42)*	
Tobin's Q					0.001 *(0.45)*
Constant	-0.005* *(-1.87)*	-0.000 *(-0.08)*	-0.006* *(-1.90)*	-0.005** *(-2.03)*	-0.008** *(-1.92)*
Adjusted R-squared	-0.001	0.001	-0.002	0.001	-0.001
N	705	310	606	709	859

Panel C: Governmental characteristics								
Model	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Total compensation	0.000 *(0.04)*							
Cash compensation		-0.000 *(-1.13)*						
Salary			-0.000 *(-1.15)*					
Age				-0.000 *(-1.00)*				
Gender					0.002 *(0.11)*			
CEO pay slice, total compensation						-0.017 *(-0.67)*		
Tenure							0.000 *(1.03)*	
% of insiders								0.064*** *(2.98)*

(Table 13 continued)

Constant	-0.004 *(-1.18)*	-0.001 *(-0.15)*	0.003 *(0.40)*	0.022 *(0.83)*	-0.006 *(-0.43)*	0.003 *(0.25)*	-0.008* *(-1.81)*	-0.016*** *(-3.46)*
Adjusted R-squared	-0.002	0.001	0.001	-0.000	-0.002	-0.001	0.000	0.015
N	534	534	534	534	534	534	534	533