

The influence of corporate governance mechanisms on the M&A performance of the acquiring firm

ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of Economics

Master thesis Financial Economics

25-07-2017

Abstract

This paper investigates the influence of several corporate governance mechanisms on the M&A performance of the acquiring firm by studying a sample of 2022 completed mergers and acquisitions between 2003 and 2014. In the results I find no conclusive evidence that having a ‘good’ corporate governance structure lead to an improvement of the company’s M&A performance. Only the variable that measures the number of blockholders shows a consistent significant and negative relation to the company’s M&A performance. Finally, the subsample of the data that only includes mergers that were completed in a period of low investor sentiment shows the strongest evidence that having a ‘good’ corporate governance structure can improve a company’s M&A performance.

Student: Matthijs Van den Neste
Student-id: 436204
Supervisor: Dr. M. Montone
Master: Financial economics

TABLE OF CONTENTS

1. INTRODUCTION	3
2.1 LITERATURE REVIEW	5
2.1.1 VALUE CREATION/DESTRUCTION OF M&A'S	6
2.1.2 CORPORATE GOVERNANCE AND FIRM VALUE	7
2.1.3 CORPORATE GOVERNANCE AND M&A PERFORMANCE	8
2.2 HYPOTHESIS DEVELOPMENT	8
2.2.1 BOARD CHARACTERISTICS	9
2.2.2 CEO CHARACTERISTICS	9
2.2.3 COMPANY CHARACTERISTICS	10
3. DATA	11
4. METHODOLOGY	12
4.1 DEPENDENT VARIABLE	12
4.1.1 CUMULATIVE ABNORMAL RETURN (CAR)	12
4.2 INDEPENDENT VARIABLES	13
4.2.1 BOARD INDEPENDENCE	13
4.2.2 BOARD SIZE	14
4.2.3 CEO TENURE	14
4.2.4 CEO DUALITY	15
4.2.5 CORPORATE GOVERNANCE INDEX	15
4.2.6 BLOCKHOLDERS/LARGE SHAREHOLDERS	15
4.3 CONTROL VARIABLES	16
4.3.1 INDUSTRY RELATEDNESS	16
4.3.2 STATUS TARGET COMPANY	16
4.3.3 SIZE ACQUIRER	16
4.3.4 METHOD OF PAYMENT	16
4.3.5 DEAL VALUE	17
4.3.6 TOBIN'S Q	17
4.3.7 LEVERAGE	17
4.3.8 LIQUIDITY FACTOR	17
4.4 REGRESSION	18
4.5 ASSUMPTIONS	18
4.5.1 MARKET EFFICIENCY	18
5. RESULTS	19
5.1 SAMPLE DISTRIBUTION	19
5.2 SUMMARY STATISTICS	20
5.3 REGRESSION RESULTS	20
5.4 SUBSAMPLE REGRESSION RESULTS	23
5.4.1 SUBSAMPLE RESULTS BASED ON SIZE	23
5.4.2 SUBSAMPLE RESULTS BASED ON INVESTOR SENTIMENT (STATIC MEASURE)	24
5.4.3 SUBSAMPLE REGRESSION RESULTS BASED ON INVESTOR SENTIMENT (DYNAMIC MEASURE)	24
6. DISCUSSION	25
6.1 LIMITATIONS	26
7. CONCLUSION	27
8. APPENDIX	30
9. REFERENCES	45

1. Introduction

Over the last decades, the subject of corporate governance has become increasingly more important. This started in 2002, when following some corporate scandals; legislators and regulators in the US passed the Sarbanes-Oxley act in order to reform the corporate governance structures in corporations. Furthermore, there was increased regulation and rule making affecting corporate affairs by the US Securities and Exchange commission (SEC) and also with the New York Stock Exchange (NYSE) and NASDAQ. The main objective of the increase in regulation was to establish clear accountability of a public company's CEO and CFO for the accuracy of the company's public disclosures (e.g. annual report) as well as strengthen the role played by the board of directors and key board-committees (compensation, audit, governance) in the oversight of management. From a practical perspective this meant that public companies had to increase the board independence (number of outside directors in the board) and that they were required to have a financial expert in the audit committee. Furthermore one of the most important points of Sarbanes-Oxley is that the company's auditor needs to be independent and to reinforce this independence some more, the audit partner and other key personnel of that firm engaged with the client must rotate every five years.

However, not much was known at the time as to how these reforms would impact the shareholder wealth. Since then, several studies (Bebchuk, Cohen & Farrell, 2009); Durnev & Kim, 2005; Gompers, Ishii & Metrick, 2003) have linked corporate governance to both firm value and long run stock performance and have found a positive relation, meaning that companies with better corporate governance structures in place enjoy higher valuations and higher growth opportunities. As a main explanation for this relation, the authors state that a better corporate governance structure reduces the agency conflict by removing uncertainties about future cash flows. This will lead to a reduced cost of capital, which results in a higher valuation.

Besides higher growth opportunities and an increase in firm value, there may be other beneficial effects of having a good corporate governance structure. Many firms in their corporate lifetime are subject, target, or both of a merger or acquisition, which often represents the single most important financial transaction of a company. Much of the empirical literature agrees that the shareholder value of the target shareholders increases significantly in case of a merger announcement. However, the effect on the shareholder value of the acquirer shareholders is much less clear. This begs the question whether there are

certain circumstances, namely a better corporate governance structure, in which the effect on the shareholder value of the acquirer is more positive than would normally be the case.

Using a sample of 2022 completed mergers and acquisitions between 2003 and 2014, this paper does not find conclusive evidence that having a ‘good’ corporate governance structure, as measured by six different proxies, lead to an improvement of a company’s M&A performance. One of the proxies for a good corporate governance structure, namely the amount of blockholders (shareholders with a stake of more than 5% of the shares outstanding) deserves some further analysis. This variable is the only proxy that shows a consistent significant and negative relation to the abnormal merger announcement return, which proxy’s for a company’s M&A performance. Further analyses of subsamples of the dataset based on size of the acquirer and investor sentiment show that having a ‘good’ corporate governance structure can benefit a company’s M&A performance in certain situations. This is especially the case for the subsample of the mergers that were announced in a period of low investor sentiment.

There is one previous paper that examines the effect of corporate governance mechanisms on the profitability of firm acquisitions (Masulis, Wang & Xie, 2007). This paper studies a sample of mergers between 1990-2003 and finds that acquirers with more anti-takeover provisions (proxy for weak corporate governance structure) experience significantly lower abnormal merger announcement returns. These findings are in line with previous literature on anti-takeover provisions. Furthermore, in this study they find that acquirers operating in more competitive industries or separating the positions of CEO and chairman of the board experience higher abnormal announcement returns.

This thesis adds to earlier work by Masulis, Wang & Xie (2007) by examining the link between corporate finance and corporate governance in a more recent time period (2003-2014) in order to see the effects of Sarbanes-Oxley. This paper focuses more on specific corporate governance variables whereas the focus of Masulis et al. (2007) lies more with the link between anti-takeover provisions and M&A performance. The time-period studied in this paper includes both a merger wave (2003-2007) and the aftermath of the financial crisis (2008-2014). Furthermore in subsequent analyses, this study investigates the influence of firm size and investor sentiment on the link between corporate governance and M&A performance. The main focus of this paper lies in determining whether companies with a ‘good’ corporate governance structure indulge in less value-destroying acquisitions than companies with a weaker corporate governance structure.

Since a ‘good’ corporate governance structure is a rather general statement, I’ve created several sub-hypotheses that deal with specific aspects of this structure. In this thesis I will study three distinct areas that indicate the health of a company’s corporate governance structure, namely: board characteristics, CEO characteristics and company characteristics. I will elaborate more on these sub-questions in the chapter “hypothesis development”.

This thesis is relevant from an academic point of view since it furthers our knowledge on some of the effects of the Sarbanes-Oxley act. Furthermore it shows how corporate governance influences M&A performance in times of a recession and in times of a recovery. Also from a business perspective this topic is interesting since it could potentially improve the M&A performance of companies. Also it can show to which of the corporate governance mechanisms companies should pay more attention to and which are of less importance.

There are a few important limitations of this study. Some corporate governance variables are only available bi-annually for the period 2003-2006. For the missing years, I have assumed that the data is the same as the year after. Furthermore, for the CEO tenure, I only look at the number of years this person as active as CEO for the current company. It could be that before his current tenure as CEO, this person was CEO for another company, however this is outside the scope of this thesis.

The build-up is as follows. In section II, I represent the Literature review and hypothesis development. In section III and IV, I will discuss the data and methodology that I use. In section V, I will discuss the empirical results on the influence of corporate governance on a firm’s M&A performance. Section VI will discuss some of the limitations and a short discussion of this study. Section VII will conclude this paper.

2.1 Literature Review

In this section, I will discuss three broad subjects in previous literature that are related to the research design used in this thesis. First, I will discuss literature about the value creation/destruction of mergers and acquisitions. This is important since I want to control for any value-creation/destruction effect that is not related to corporate governance. Secondly, I will discuss the main literature about corporate governance and it’s effect on firm value. Finally, I will discuss previous literature that links corporate governance to the M&A performance of the bidding firm.

2.1.1 Value creation/destruction of M&A's

There is ample literature on the debate whether M&A's create or destroy shareholder value. In order to answer this question one has to look at both the effect of a merger announcement on the acquiring firm's shareholder value and on the target firm's shareholder value. Much of the previous literature agrees that the effect of a merger announcement on the target firm's shareholder value is positive and significant (Jensen and Ruback, 1983). Jarell and Poulsen (1987) examine tender offers between 1960 and 1985 and find significant and positive returns for target shareholders ranging from an average of 19% in the 1960's to an average of 30% from 1980 to 1985. Lehn and Poulsen (1987) investigate a sample of leveraged buyouts and going private transactions and find an average premium for target shareholders of 21% between 1980-1984. It is important to note that the total gain of a merger announcement for target shareholders in these studies was probably higher than the reported values, since these studies only look at the event window surrounding a merger announcement (for example, 1 day before a merger announcement to 1 day after the merger announcement). In many of the cases there is already some leakage of information to the market (insider trading) that positively influences the target firm's share price.

Previous literature regarding the effect of a merger announcement on the acquirer firm's shareholder value is much more ambiguous. Finance theory expects positive effects for acquiring firm's shareholders if there are synergistic opportunities, an increase in market power or cost reduction possibilities. However, there might be negative effects for the acquiring firm's shareholders if the M&A objective is diversification or stems from empire building. Franks, Harris & Titman (1991) find that the method of payment for an M&A, whether this is stock or cash, also influences the announcement returns for the bidding firm's shareholders. They find that there are significant negative announcement returns for bidders using equity as payment, while cash bidders have zero or positive gains. This is in line with the pecking order theory of Myers (1984). Myers states that there is a pecking order that firms use when financing investments, first they will try to use internal funds, secondly they will use debt, thirdly hybrid securities and as a last resort equity. Myers and Majluf (1984) find in their paper that overpriced firms tend to use equity to finance an M&A investment, which causes investors to conclude that firms paying with stock are overvalued and firms paying with cash are undervalued.

2.1.2 Corporate governance and firm value

Over the last three decades, the subject of corporate governance has become increasingly more important. Before this time, there was not much oversight on a manager's performance and proxy fights, shareholder activism and hostile takeovers were quite rare. However the increase in popularity of junk bonds in the 1980's changed this landscape, by enabling hostile takeovers for small and large firms alike. As a consequence, firms started to protect themselves from hostile takeovers by adding takeover defences like a poison pill or a golden parachute for management. Gompers, Ishii & Metrick (2003) wrote one of the first papers investigating the influence of corporate governance on firm value by combining 24 corporate governance provisions into an index that proxies for the strength of shareholder rights. They then studied the relation between this corporate governance index (GIM index) and corporate performance in 1990-2003 and found that a portfolio of firms with the strongest shareholder rights (democratic firms) earned significantly higher returns (8,5% per year), were valued more highly and had better operating performance than a portfolio of firms with the weakest shareholder rights (dictator firms). Bebchuk, Cohen and Ferrell (2009) add to the paper of Gomper, Ishii & Merick (2003) by studying which of the twenty-four corporate governance provisions play a key role in explaining the negative relation to firm value and stock returns. They find that six of the twenty-four corporate governance provisions (staggered boards, limits to shareholder bylaw amendments, poison pills, golden parachutes, supermajority requirements for mergers and charter amendments) are associated with economically significant reductions in firm valuation and also large negative abnormal returns in 1990-2003. The other eighteen provisions are according to them uncorrelated with either reduced firm valuation or negative abnormal returns.

Other studies have focused on boardroom characteristics like board size and board independence. Hermalin & Weisbach (2003) summarized the empirical literature on this subject and have found that most research has established a negative relation between the number of directors on a firm's board and the firm's financial performance. Furthermore they find that board composition, as measured by the ratio of inside directors to total directors is uncorrelated to firm performance. However, the authors state that endogeneity problems complicate the empirical work on boards of directors and on corporate governance aspects in general. For example, firm performance is a result of actions of previous directors but also a factor that potentially influences the choice for new directors. Lehn, Patro and Zhao (2004) recognize the endogeneity problem and find no robust relation between firm performance and either board size or structure when they treat the board characteristics as endogenous

variables.

Another board characteristic that has been extensively studied is CEO duality, which means that the same person holds the CEO function and the chairman of the board function. The literature is mixed on the relation between CEO duality and firm performance. The argument in favour of separate ownership is based on agency theory. When ownership and control are not separated, the person holding both positions might make self-serving decisions that are not in the interest of the shareholders. Core, Holthausen & Larcker (1999) find that when one person holds both the CEO and the chairman of the board position his compensation will be higher, agency problems are higher and subsequent firm performance is lower. The argument in favour of dual ownership is based on the superior firm-specific knowledge of CEOs and the benefits of swift and strong leadership. Brickley, Coles & Jarell (1997) find no evidence that separating the positions of CEO and chairman will lead to a better performance due to several overlooked costs (information costs, costs of having firms change their succession process, inconsistent decision making with shared authority).

2.1.3 Corporate governance and M&A performance

Corporate governance and M&A performance are both subjects that have been very well represented and studied in the empirical literature. However, there is not much literature about how corporate governance possibly influences M&A performance. Masulis, Wang & Xie (2007) wrote the most influential paper on this topic by studying especially how the market for corporate control affects the profitability of firm acquisitions. They find that firms with more antitakeover provisions experience significantly lower abnormal merger announcement stock returns. This is in line with agency theory since the managers at firms with more antitakeover provisions experience less disciplinary power of the market for corporate control and have more freedom to engage in self-serving empire building acquisitions that lower the shareholder value. Furthermore they find that firms that separate the position of CEO and chairman of the board experience higher abnormal announcement returns which is in line with Core, Holthausen & Larcker (1999).

2.2 Hypothesis Development

This section will highlight the hypotheses I have constructed in order to answer the main research question:

“Does a strong corporate governance structure result in a better M&A performance of the acquiring firm?”

I will look into three distinct areas that indicate whether a company has a strong corporate governance structure, namely: board characteristics, CEO characteristics and company characteristics.

2.2.1 Board characteristics

The first main indicator of the health of a company’s corporate governance structure is the board characteristics. The board of directors plays a key role in the internal governance of a company. Their main target is to give strategic direction and to monitor the actions of management. Especially the monitoring part is vital in dealing with agency problems within the firm. Possibly, independent directors have better incentives to monitor since they have no personal ties with management. Fama (1980) describes the independent directors as: “professional referees whose task it is to stimulate and oversee the competition among the firm’s top management”. It is therefore to be expected that having more outside directors on the board reduces agency costs and in turn increases firm value.

Another board characteristic that is important in relation to corporate governance and firm performance is the size of the board. Lipton and Lorsch (1992) argue in their seminal paper that boards should be no larger than a maximum of ten persons, and preferably consist of eight or nine directors. They argue that smaller boards are better since they allow the directors to know each other better, have more effective discussions and to reach true consensus from their meetings. Guest (2009) finds in his study of the UK market, that an increase in board size negatively impacts a firm’s profitability. These board characteristics lead to the following hypotheses:

1A: “Does a higher board independence improve the M&A performance of the acquiring firm?”

1B: “Does a smaller board size improve the M&A performance of the acquiring firm?”

2.2.2 CEO characteristics

The second type of proxy for a strong corporate governance structure is the CEO characteristics. The CEO is generally considered as the person that has the most influence on a company’s strategy and performance. Hermalin & Weisbach (1991) studied the effects of CEO tenure on firm performance and find that for low levels of CEO tenure (<15 years as CEO) there is no significant effect on firm performance. However for CEO’s who have been on the job for more than 15 years, each additional year will further reduce firm profitability.

This suggests that CEOs who stay too long at the job become entrenched, which reduces firm performance. Since not many CEO's in this dataset have tenures of more than 15 years, I will use 10 years as the cut-off point.

A different CEO characteristic that is linked to corporate governance is CEO duality, which means that the same person holds the position of the CEO and chairman of the board. Potentially, separating the positions of chairman of the board and CEO might reduce agency costs since it is harder for this person to make self-serving decisions that are not in the interest of the shareholders. These CEO characteristics lead to the following hypotheses:

2A: "Does a CEO tenure of more than 10 years decrease the M&A performance of the acquiring firm?"

2B: "Does CEO duality decrease the M&A performance of the acquiring firm?"

2.2.3 Company characteristics

The final proxy for a strong corporate governance structure is the company characteristics. In the empirical literature, several corporate governance indices, that contain many corporate governance provisions, are tested against firm performance (Gompers et al. 2007). One point is added per provision, which translates into companies that score the highest on this index will have the lowest shareholder rights and the weakest corporate governance structure. Vice versa, companies that score lowest on this index will have the highest shareholder rights and the strongest corporate governance structure.

Another company characteristic that can strengthen its corporate governance structure is the existence of large shareholders, also known as blockholders. Blockholders can use two different mechanisms to exert control. Firstly, they have the possibility to directly intervene with the firm, which is known as 'voice'. They can do this by suggesting a strategic change at the annual shareholders meeting or via a public shareholder proposal. The second option available to blockholders is 'voting with their feet'. This means that the blockholders can sell their shares if they think the manager is destroying value. This will push down the share price, which punishes the manager. Often the threat of voting with their feet will incentivize the manager to maximize firm value (Edmans, 2014). Having more blockholders can potentially increase the monitoring and reduce the agency conflict, which will lead to a stronger corporate governance structure. These company characteristics result in the final two hypotheses:

3A: "Does a lower corporate governance index score improve the M&A performance of the acquiring firm?"

3B: *“Does having more blockholders improve the M&A performance of the acquiring firm?”*

3. Data

I use several databases in order to study the interaction between corporate governance mechanisms and M&A performance. I use the Thomson One Banker database to gather deals data, since the acquiring firms that I investigate are located in the US. It's important to note that this dataset is different from the one that Masulis et al. (2007) use. They get their data from the SDC database of Thomson Reuters, however this dataset is unavailable for students. Since both the SDC database and the Thomson One Banker database contain deals data on US firms, this shouldn't influence our results. I use the ISS (formerly Riskmetrics) database to gather corporate governance data and Datastream to find stock return data around the merger announcement. I observe mergers that are announced between 1 January 2003 and 31 December 2014 and I have used the following criteria, following Masulis et al. (2007), in selecting these deals:

1. The acquisition is not only announced but also completed.
2. The acquirer purchases at least 50% of the target's shares in the transaction and owns at least 90% of the target's shares after the acquisition
3. The deal value is higher than \$1 million (and is at least 1% of the acquirer's market value of equity 4 weeks prior to the merger announcement)
4. The acquirer has historical stock return data available of at least 210 trading days before the merger announcement (start estimation window)
5. The acquirer is a publically listed company on either the NASDAQ or the NYSE
6. No tender offers, these can bias our results since tender offers on private or subsidiary firms are not possible.
7. Corporate governance data is available on the ISS (formerly Riskmetrics) database.

I end up with 2022 observations since a few observations were dropped due to missing values. Furthermore, for the regressions regarding CEO duality and blockholders, I end up with respectively 956 and 855 observation due to missing values. It is important to note that corporate governance data in the period 2003-2006 was only available bi-annually (2004 and 2006). Therefore I have assumed that the corporate governance data in 2003 is equal to that of 2004 and the 2005 data is equal to 2006.

4. Methodology

This section will outline the methodology used to study the main research question and sub-questions. I make use of an ordinary least squares regression, which consists of three parts. First I will discuss the dependent variable in my regression, the cumulative abnormal merger announcement return, this is my measure of M&A performance. Second I will explain the Independent variables in the regressions: board independence, board size, CEO tenure, CEO duality, the corporate governance index and the number of large shareholders/blockholders. Finally I will talk about the control variables and their relevance to this study.

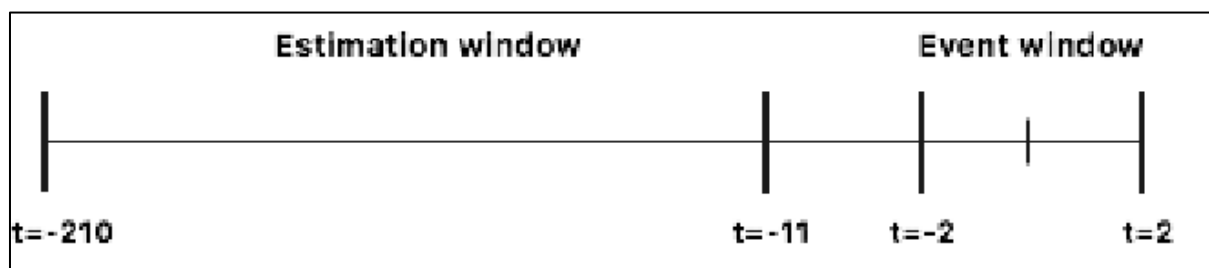
4.1 Dependent variable

4.1.1 Cumulative Abnormal Return (CAR)

The main dependent variable in my regression is the cumulative abnormal merger announcement return. In order to get this variable I make use of the event study methodology. The first author to make implicit use of this methodology was Dolley (1933) who examines in his paper the price effects of stock splits by studying the nominal price change at the time of the stock split. Later in the 1960's and 1970's the level of sophistication of event studies increased by removing general stock market movements and separating out the effect of the specific event (Fama, Fisher, Jensen and Roll, 1969). This event study is now the standard methodology of measuring security price reactions around specific events that can potentially increase firm value (Mackinlay, 1997). In this case the merger announcement is the specific event.

The event study compares returns around the specific event, the event window, with the normal returns estimated from the estimation window, not taking the event in account. I use an estimation window of 200 trading days, starting at $t = -210$ and ending at $t = -11$ (following the methodology of Masulis et al. (2007)). It is customary to define the event window to be larger than the day of the specific event in order to fully capture the announcement effect and account for potential insider trading and late market corrections (Mackinlay, 1997). In this case the event window will be 5 trading days, starting at $t = -2$ and ending at $t = 2$.

Figure 1: Graphical representation of the event study



In order to find the merger performance, I have to calculate the abnormal return (formula 1). The abnormal return represents the actual ex post return of the security over the event window minus the normal return over the event window. The normal return is the expected return if no event would have taken place.

$$AR_{it} = R_{it} - E(R_{it}|X_t) \quad (1)$$

There are two methods to model the normal return, the ‘constant mean return model’ and the ‘market model’. The ‘constant mean return model’ assumes the mean security return is constant through time whereas the market model assumes a linear relationship between the security return and the market return. For this study, I use the ‘market model’ return (formula 2) since it represents a potential improvement over the ‘constant mean return model’ by removing the part of the return that is related to the variation in the market return. As a consequence, the variance of the abnormal return is reduced, which can lead to an increased ability to detect event effects (Mackinlay, 1997).

$$R_{it} = a_i + \beta_i R_{mt} + \varepsilon_{it} \quad (2)$$

$$E(\varepsilon_{it}) = 0 \quad \text{var}(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$$

Finally, the last step is accumulating the abnormal returns of each trading day in the event window in order to get the cumulative abnormal return.

$$CAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

4.2 Independent variables

4.2.1 Board independence

Board independence is one of the main independent variables in the regression and proxies for a good corporate governance structure. As was mentioned in the hypothesis development, board independence plays a key role in the internal governance of a company. It is to be expected that having more outside directors on the board reduces agency costs and in

turn increases firm value. However many studies find an insignificant relationship between board independence and firm value (Mehran, 1995). Hermalin and Weisbach (1998) think this is due to endogeneity problems and suggest that poor performance leads to more independent directors. In a cross section this effect might show worse performance for firms with more outside directors. In this study there is a fitting exogenous shock, when the Sarbanes-Oxley act passed in 2002, to study the effect that board independence has on firm performance. Board independence is measured as the ratio of outside directors to total directors, which is common in the empirical literature (Hermalin and Weisbach, 1998).

4.2.2 Board size

Board size is the second main independent variable in the regression. In the empirical literature a smaller board is preferable over a larger board since it allows the directors to know each other better and lead to more effective discussion making. A smaller board size is therefore a proxy for a strong corporate governance structure. Board size is measured as the number of directors in the board in the given year.

4.2.3 CEO tenure

The third main independent variable in the regression is CEO tenure. In the empirical literature (Hermalin & Weisbach, 1991) it was found that for CEO's who have been on the job for more than 15 years, each additional year would further reduce firm profitability. From the frequency graph of the distribution of CEO tenure in this sample (table 11, appendix), it can be deduced that only 20% of the CEO's in this sample have a tenure of over 15 years. Since this is only a small subsample and entrenchment can also happen before the 15-year mark, I will use a 10-year tenure as a cut-off point for CEO entrenchment (35% of the sample). CEO's who stay too long active in their function become entrenched; therefore a shorter (than 10 years) CEO tenure is a proxy for a strong corporate governance structure. CEO tenure is measured, as the number of years the CEO is active in his current function at the time of the merger announcement. Finally, a dummy variable is created that takes a value of 1 for CEO's that are active for more than 10 years in their function and a value of 0 for CEO's who's tenure is shorter than 10 years. For robustness purposes, I will also perform regressions that use a tenure of 5 and 15 years as their cut-off point for entrenched CEO's (table 12)

4.2.4 CEO duality

CEO duality is the next main independent variable in the regression and it means that the position of CEO and chairman of the board is held by the same person. As was mentioned in the hypothesis development, separating the position of CEO and chairman of the board will potentially lead to lower agency costs since it is harder for this person to make self-serving decisions. CEO duality is measured as a dummy variable that takes a value of 1 when the CEO and chairman of the board are the same person and takes a value of 0 when this is not the case

4.2.5 Corporate governance index

The fifth main independent variable in the regression is the corporate governance index. In the empirical literature, several corporate governance indices are tested against firm performance. One of the most well known indices is the GIM index (Gompers et al., 2003) that contains 24 corporate governance provisions, that together proxy for the strength of shareholder rights. The other important corporate governance index (Bebchuk et al., 2009) is derived from the GIM index and contains 6 of the 24 corporate governance provisions, since the authors find that the other 18 provisions are uncorrelated to a reduced firm valuation. The corporate governance index in this thesis uses 3 of the 6 provisions of Bebchuk et al. (2009) due to data limitations. The provisions that are contained in this index are the existence of poison pills, golden parachutes and staggered boards. One point is added per provision, which translates into companies that score the highest on this index will have the lowest shareholder rights and the weakest corporate governance structure. Vice versa, companies that score lowest on this index will have the highest shareholder rights and the strongest corporate governance structure.

4.2.6 Blockholders/Large shareholders

The last main independent variable in the regression is the number of large shareholders, also known as blockholders. As was mentioned in the hypothesis development, having more blockholders can potentially increase the monitoring and reduce the agency conflict, which will lead to a stronger corporate governance structure. This variable is measured as the number of shareholders with a higher than 5% stake of the shares of a company (Mehran, 1995). I choose 5% since this level of ownership triggers mandatory public filing under SEC regulation.

4.3 Control variables

Finally, I will use several control variables in my regressions to distinguish between the price effect of the merger announcement that is due to corporate governance and due to general market conditions.

4.3.1 Industry relatedness

The first control variable is a dummy variable for the industry relatedness of the acquisition. Several authors find that diversifying mergers destroy shareholder value (Berger & Ofek, 1995). The main reason for these significantly lower returns is overinvestment. Furthermore, diversified firms destroy value by subsidizing the poorly performing units too much. The dummy variable for industry relatedness takes a value of 1 when the acquiring firm and the target firm share the same SIC-code and takes a value of 0 otherwise.

4.3.2 Status target company

The second control variable is a dummy variable to control for the form of the target company. According to Capron & Shen (2007), acquirers of private targets perform better than acquirers of public targets. To fully control for this effect, I will use a dummy variable for public, private and subsidiary targets. In the regression I leave one of these dummy variables (for a subsidiary target) out due to collinearity issues.

4.3.3 Size acquirer

The next control variable is for the size of the acquiring company. The empirical literature suggests a size effect in acquisition announcement returns. Moeller, Schlingemann and Stulz (2004) find that the announcement return for small acquirers is around 2% higher than that of large acquirers. This effect is significant even when controlled for the form of financing and whether the target firm is private or public. I use the market value of equity of the acquirer 4 weeks prior to the acquisition announcement as proxy for the size of the acquirer. I use the natural logarithm in the regression to get the percentage increase/decrease.

4.3.4 Method of payment

In my regressions I will control for the method of payment, whether this is a stock, cash or hybrid payment. Generally the acquiring firms will try to pay the acquisition with cash when their shares are undervalued and will pay with stock when their shares are overvalued (Myers, 1984). Franks et al (1991) and Martin (1996) find significant negative announcement returns when the acquiring firm pays with stock and zero to positive announcement returns

when the acquiring firm pays with cash. Since I have 3 dummy variables (cash, stock, hybrid), I will leave one out due to collinearity issues (hybrid)

4.3.5 Deal Value

The fifth control variable in this regression is the deal value. Alexandridis, Fuller, Terhaar & Travlos (2013) find a negative relation between offer premia and target size, which implies that acquirers pay less for large targets. However, they also find that acquisitions of large targets destroy more shareholder value than the acquisitions of small targets. They are of the opinion that this might imply that target size proxies for the unobserved complexity surrounding large deals. I use the natural logarithm in the regression to get the percentage increase/decrease.

4.3.6 Tobin's Q

Furthermore, I control for Tobin's Q in my regression. Servaes (1999) finds that takeover gains are larger when the q ratio of the bidder is higher and the q ratio of the target is lower. This is line with Lang, Stulz and Walking (1989) who find that bidders with high q ratio's (higher than 1) have significant positive abnormal returns when they engage in a takeover, whereas bidders with low q ratio's (lower than 1) experience significant negative abnormal returns from a takeover. I define Tobin's q as the ratio of the market value of assets over the book value of assets. I calculate the market value of assets as the book value of assets minus the book value of equity plus the market value of common equity. This is the same definition that Masulis et al. (2007) use in their paper.

4.3.7 Leverage

Next, I control for leverage, which is defined as the net debt divided by the market value of assets. This is slightly different from the definition of Masulis et al. (2007) who uses the gross debt divided by the market value of assets. This is due to limitations of the dataset of Thomson One banker but it should have no large effect on the reliability of the results. The effect of leverage on firm value is ambiguous. It can have a positive effect on firm value since it decreases the free cash flow at hand, which reduces profit diversion by managers. It can also have a negative effect on firm value if it increases the risk of financial distress and bankruptcy

4.3.8 Liquidity factor

The final control variable in this regression is the liquidity factor of Pastor and Stambaugh (2003). They find that over a 34-year period, the average return on stocks with

high sensitivities to liquidity exceeds the return for stocks with low sensitivities by 7,5% annually. This 7,5% is adjusted for exposures to the three factors of Fama and French (1993) and a momentum factor. This liquidity factor is a monthly average of individual-stock measures estimated with daily data.

4.4 Regression

Since I lose observations with some of the dataset merges, specifically regarding the merges to retrieve blockholder data and CEO characteristics data, I will perform three regressions. The first regression (with the most observations) includes three of the six explanatory variables (board independence, board size and the corporate governance index), the second regression adds the data on CEO duality and CEO tenure, the final regression also includes the data on blockholders. This increases the robustness of my results. Adding the variables together results in the following main regression:

$$\begin{aligned}
 CAR = & \alpha + \beta_1 X + \beta_2 \text{Dummy Diversification} + \beta_3 \text{Dummy Public} + \beta_4 \text{Dummy Private} \\
 & + \beta_5 \text{Log Size Acquirer} + \beta_6 \text{Dummy Stock} + \beta_7 \text{Dummy cash} \\
 & + \beta_8 \text{Log Deal Value} + \beta_9 \text{Tobin's Q} + \beta_{10} \text{Leverage} \\
 & + \beta_9 \text{Liquidity factor} + \varepsilon
 \end{aligned}$$

X represents the 3, 5 and 6 different independent variables for respectively the first, second and third regression.

4.5 Assumptions

4.5.1 Market efficiency

A few decades ago, Fama (1970) developed a theory that was known as ‘the market efficiency hypothesis’. This theory deals with whether prices at any given point in time fully reflect available information. There are three distinct forms of the efficient market hypothesis that each represents a different level of information that is reflected in the share prices. First, there is the weak-form efficient market that assumes that historical prices are the only degree of information that is reflected in the current price. Secondly, there is the semi-strong efficient market, suggesting that only publicly available information is incorporated in prices. Finally, there is a strong-form efficient market, which assumes that all informational content available at a certain moment is reflected in stock prices, there is no information asymmetry. However, this strong form is not a realistic representation of the current stock markets, it is probably

best viewed as a benchmark against which the significance of differences from market efficiency can be tested. For this thesis, I assume the semi-strong form of market efficiency.

5. Results

This section will highlight the sample distribution, the summary statistics and the empirical results of the regressions

5.1 Sample Distribution

Table 1 shows summary statistics for the sample data sorted by the year of the merger announcement. One can see that the number of acquisitions gradually increases from 2003 to 2006, after which it slows down in 2007, which marks the beginning of the financial crisis. The number of acquisitions hit its lowest point in 2009, after which it starts to increase again until it reaches a new peak in 2014. The effects of the financial crisis can also be seen from the ratio of deal value to the market capitalization of the acquirer, since this is the lowest in 2007 and 2008 (respectively 9,5% and 9,0%).

In table 2, the summary statistics are shown for the cumulative abnormal returns at the time of merger announcement. In part A, the sample is divided between the observations that have an above median market capitalization and the observations that have a below median market capitalization. As to be expected from previous literature (Moeller et al., 2004), the observations with a below median market capitalization have a significantly higher CAR than the observations with an above median market capitalization. Furthermore, panel A also shows the difference in CAR between the observations that took place before the financial crisis (2003-2007) and the observations that happened after the crisis (2008-2014). It is interesting to see that the CAR of the observations after the crisis is significantly lower than the CAR of the observations before the crisis. It seems that in periods when the investor sentiment is high (years preceding the crisis) the CAR is inflated and in periods when the investor sentiment is low (years after the crisis) the CAR deflates again.

Furthermore, from panel B one can see that the characteristics of the target company influence the announcement returns substantially. If the target company is a public firm, the announcement returns are negative and significant at the 10% level. Whereas, when the target company is a private or a subsidiary firm, the announcement returns are positive and significant at the 1% level. Finally, when the sample is split by method of payment (stock, cash or hybrid), it can be seen that cash offers yield significantly higher announcement returns

than stock offers. The mergers that were paid with a hybrid form of stock and cash have a positive but insignificant CAR.

5.2 Summary Statistics

The summary statistics can be found in table 3 in the appendix. One can see from these summary statistics that the size of the acquirer has nearly doubled when compared to the sample of Masulis et al. (2007) who covered the time period 1993-2004. Furthermore it can be noted that the average leverage has dropped when compared to Masulis et al. (2007). This is to be expected since the period 1993-2004 is characterized by many highly levered takeovers. The Pearson Correlation Matrix (table 14) shows that most of the variables in the regression are not highly correlated with each other, except for deal value and size of the acquirer. For robustness purposes I will also perform regressions that exclude deal value, to make sure that multi-collinearity does not affect the results (results available on demand).

5.3 Regression results

Table 4 shows the base regression results for the regressions with respectively 3, 5 and 6 independent variables. In these regressions I use robust standard errors in order to control for heteroskedasticity. One can see from column 1 that the coefficient for board independence is positive (0,01) but insignificant (p-value of 0,24). This suggests that it is possible that a higher board independence leads to a higher abnormal announcement return, but since the p-value is above 0,10, this result is not conclusive. The coefficient for board size is also positive (0,0002), however it is economically and statistically not significantly different from zero (p-value of 0,58). The coefficient for the corporate governance index variable is negative (0,002), but also statistically insignificant (p-value of 0,17). This implies that having less corporate governance provisions, which in this case translates into stronger shareholder rights, will lead to a higher abnormal announcement return. However, also in this case, a negative coefficient is not conclusive evidence since the p-value is above 0,10. Furthermore, the coefficients for a public and a private target are both negative (-0,013 and -0,006) and significant at respectively a 1% and a 5% level. This indicates that when the target is either a public or a private firm, the abnormal announcement return decreases. It is to be noted that the coefficient for a public target is twice as high than that of a private target. This means that acquiring a private target is better for the abnormal announcement return of a merger than acquiring a public target, which is consistent with previous findings of Capron and Shen

(2007). The dummy for a subsidiary target is left out of the equation due to perfect collinearity. The size of the acquirer has a negative coefficient and is significant at the 1% level. Since I used the natural logarithm of the size of the acquirer, this means that a 1% increase in the size of the acquirer, results in a decrease of the CAR of 0,008. This is consistent with previous literature (Moeller et al., 2003) that studied the effect of size on the merger announcement return. The coefficients for all stock financed deals and all cash financed deals are respectively negative (-0.014) and positive (0,006) and both are significant at the 5% level. This is to be expected from a previous study of Franks et al. (1991) and Martin (1985). The coefficient for deal value is seen to be positive and significant at the 5% level. This is contrary to the findings of Alexandridis et al (2013) who report a 2,37% decrease in announcement returns for larger targets relative to smaller targets. However, they also find that offer premia are negatively related to target size, which implies that acquirers pay less for larger targets. It is possible that this effect is more pronounced in this dataset, which studies a more recent time-period (2003-2014) and that this effect in turn will lead to a positive announcement return instead of the negative announcement return that was found between 1990-2007. Both Tobin's q and leverage show negative but insignificant coefficients with p-values of respectively 0,296 and 0,518. Finally, the liquidity factor is positive with a coefficient of 0,056 and significant at the 5% level. This is in line with the study of Pastor and Stambaugh (2003).

The regression results of the second regression, which now includes the main independent variables CEO tenure and CEO duality, can be seen in column 2 of table 4. The results are fairly similar to the results of the regression in column 1. The coefficient for CEO tenure and CEO duality are statistically insignificant and also economically indifferent from zero. Furthermore, the coefficient for Tobin's q is negative and significant at the 5% level, whereas this variable was insignificant in the regression in column 1. Finally, the dummy variable for an acquisition that was fully paid in cash is in this regression insignificant, whereas it was significant in the first regression.

The results of the third regression in table 4 can be found in column 3. This regression includes all the variables of the previous regressions and adds a variable that measures the number of blockholders in the acquiring firm. The coefficient for the blockholders variable is negative and significant at the 10% level. This indicates that if the number of blockholders increases, the abnormal merger announcement return decreases. This result is contrary to what I expected from economic theory, since having more blockholders potentially increases the amount of monitoring and reduce the agency conflict. However a potential explanation is that

not the amount of blockholders matters, but the relative number of shares of the largest shareholders (Konijn, Kräussl & Lucas, 2011). A company with many small blockholders (blockholder dispersion) can suffer from the free-rider problem, in which small blockholders may choose not to monitor at all and profit of the monitoring activities of other blockholders. Companies with one or two large blockholders don't suffer from this problem, since the stakes of the largest blockholders are substantially high to make it in their interest to monitor the CEO. When I control for yearly fixed effects in the regressions, the results stay the same, with the exception of the liquidity factor, which becomes insignificant (table 5). Furthermore, when I use 5 or 15 years as the cut-off point for the tenure of entrenched CEO's (instead of 10 years), the results do not change. The results of the regressions with a CEO tenure of 5 and 15 years are in table 12 of the appendix.

From the results of the previous regressions it can be noted that the independent variable that measures the board independence is often close to being significant. Therefore it is possible that this variable hides some cross-sectional effects. In order to investigate this I make use of two different interaction terms (table 9). The first term is an interaction between board independence and the CEO tenure (dummy) and the second term is an interaction between board independence and the dummy variable for a subsidiary target. Column 1 shows that by including the interaction term with CEO tenure, board independence becomes significant and negative at the 10% level. Which suggests that for companies where the CEO has a tenure of less than 10 years, adding more independent directors will lead to a lower M&A performance. On the one hand this is counterintuitive, since having more independent directors potentially reduces the agency cost. A possible explanation could be that the average degree of board independence in this sample is already quite high (76%) compared to literature that covers the period before the Sarbanes Oxley act such as Mehran (1995) (average board independence of 56%). At some point it is to be expected that adding more independent directors no longer has a positive effect on the firm performance. Another explanation could be that CEO's that have a tenure of less than 10 years don't have enough knowledge of the company compared to their counterparts that have a tenure of more than 10 years. Adding more independent directors at a company where the CEO is relatively new could therefore decrease the degree of firm-specific knowledge in the board, which in turn could negatively influence a firm's M&A performance. Column 2 shows that by including the interaction term with the dummy variable for a subsidiary target, board independence becomes significant and negative at the 10% level. This suggests that if the M&A target is not

a subsidiary firm (and thus public or private), adding more independent directors to the board will lead to a lower M&A performance.

Finally, as a robustness check, I also perform six separate regressions with each of the independent variables in order to take multicollinearity out of my results (table 10). From these results it can be seen that only the variable that measures the number of blockholders is significant (column 6) at the 5% level. This is in line with the results from my previous regressions.

5.4 Subsample regression results

In this section, I will discuss the regression results of two main subsamples of the dataset. The first subsample divides the dataset into large companies (above median market capitalization) and small companies (below median market capitalization). The second subsample focuses on investor sentiment, of which I will use a static and a dynamic measure. The static measure is a dummy variable that takes the value of 1 if the merger took place before the financial crisis (2003-2007) and takes a value of 0 if the merger took place after the financial crisis (2008-2014). The first period is the sixth merger wave in which investor sentiment is high. The period hereafter is a period of low investor sentiment. However, such a static measure can potentially bias the results, since investor sentiment can also increase or decrease somewhere within the year. Therefore, I also include a dynamic measure of investor sentiment that takes a value of 1 if the average abnormal merger announcement return of the preceding 50 mergers is positive and takes a value of 0 when this value is negative. If the average abnormal merger announcement return of the preceding 50 mergers is positive, than investor sentiment is high, if this value is negative, than investor sentiment is low (Rosen, 2006)

5.4.1 Subsample results based on size

Table 6 shows the regression results of the regressions with all 6 independent variables that have an above median size and the regressions that have a below median size. Size is hereby measured as the market capitalization of the acquiring firm, 4 weeks prior to the merger announcement. From column 1 in table 6 (firms with a below median market capitalization), it can be seen that the coefficients for the number of blockholders, the dummy variable for a public target, the dummy variable for a private target, the size of the acquirer, the dummy variable for fully paid with stocks and the deal value are significant.

The regression with the subsample of firms with an above median market capitalization (Table 6, column 2) shows that the coefficients for size of the acquirer, the dummy variable for fully paid with cash, tobin's q and the liquidity factor are significant. The influence of blockholders on the merger announcement return is apparently only significant (at the 5% level) for smaller companies. It seems that the free-rider problem that accompanies blockholder dispersion is more apparent in smaller companies than in larger companies. This seems intuitive, since large firms are already quite well monitored by other parties besides its own shareholders (for example: stock analysts, investment funds). For smaller firms, this third party monitoring is smaller, so the effect of blockholders is more pronounced.

5.4.2 Subsample results based on investor sentiment (static measure)

Table 7 (column 1) states the regression results of the mergers that took place in the sixth merger wave (2003-2007) and the regression results (column 2) of the mergers that took place hereafter (2008-2014). The coefficients for a public target, the size of the acquirer, and tobin's q are significant in the period with high investor sentiment (2003-2007). However, none of the six independent variables have a significant coefficient.

In the period after the financial crisis, where investor sentiment is low, the coefficients for the number of blockholders, public target, size of the acquirer, the dummy variable for fully paid with stocks, the deal value and the liquidity factor are significant. The influence of blockholder dispersion is apparently only significant in the time-period after the financial crisis (at the 5% level). This result is not due to the fact that the later time-period only has smaller mergers and acquisitions, in which case it would have been a spurious regression. A possible explanation is that after the financial crisis, blockholders started to pay more attention to monitoring in order to make sure that they would not suffer the same losses as during the crisis.

5.4.3 Subsample regression results based on investor sentiment (dynamic measure)

Finally, table 8 shows the regressions results of the subsample that uses a dynamic measure of investor sentiment. Column 1 contains the results of the mergers that took place in a period of high investor sentiment, whereas column 2 contains the results of the period with low investor sentiment. The coefficients for a public target, the size of the acquirer, the dummy variable for a stock deal and the deal value are significant for the observations with

high investor sentiment. However, as was also the case with the static measure of investor sentiment, none of the independent variables are significant.

For the observations that took place in a period of low investor sentiment, the coefficients for CEO duality, the corporate governance index, the number of blockholders, public target and tobin's q are significant. The coefficient for CEO duality is negative, which is in line with economic theory since it means that if the positions of CEO and chairman of the board are held by the same person, the abnormal announcement return of mergers decreases. The coefficient for the corporate governance index is positive, which is not in line with my expectations since it means that companies that score higher on the corporate governance index, which translates into weaker shareholder rights and a weaker corporate governance structure, have a higher abnormal merger announcement return. A possible explanation for this result is that two of the 3 provisions included in this index are anti-takeover defences (poison pill and golden parachute). In a period of low investor sentiment, the market might view it unfavourable for a company to be taken over. Therefore having these two take-over defences might positively influence a company's firm value and this effect might also positively influence a company's M&A performance. To test whether this is the case, I ran a separate regression that does not include the corporate governance index variable, but instead includes an index with only the two takeover defence provisions (table 13). From these results it can be seen that the coefficient for the index becomes twice as high when I only include the anti-takeover defence provisions and is now significant at the 5% level. Therefore, in a period of low investor sentiment, having these two takeover defences positively influences a firm's M&A performance

6. Discussion

Generally, most results from the initial regressions in this thesis that tried to link proxies for a good corporate governance structure to the abnormal merger announcement return have proven to be insignificant, although the sign is often in line with expectations. This is in line with earlier results of Masulis et al. (2007), who was one of the main authors to link the market for corporate control, through anti-takeover provisions, to the M&A performance of acquiring firms.

The number of blockholders is the only corporate governance proxy that shows consistently significant results, although it has a negative coefficient. This is contrary to my expectations, since I expected that having more blockholders would lead to better monitoring and in turn a better corporate governance structure that would increase the abnormal merger

announcement returns. As mentioned in the results section, a possible explanation for this result is that having many small blockholders can result in a free-rider problem. In that case the small blockholders don't monitor at all since they expect other blockholders to do the monitoring for them. A company with a few large blockholders doesn't suffer from this problem and can therefore have a better abnormal merger announcement return.

In this thesis I use an event study to calculate the abnormal merger announcement returns, which means that I calculate the expected returns based on the market model and subtract the actual returns from them. An improvement would be to use the Fama French 3- or 4- factor model, which would include, besides a market factor, factors for size, book to market ratio and momentum.

Also, I use the cumulative abnormal merger announcement return of the window that starts 2 days before the announcement and ends 2 days after the announcement. I assume that the market fully incorporates the value created (or destroyed) by the merger in this time-period. This is, of course, a simplification of the reality, since it is possible that the market already prices the share some days before or after this period. This would decrease the effectiveness of my M&A performance measure. However, if I include a longer time window it is possible that I capture the effects of other events that are completely separate from the merger. Therefore, according to Fuller, Netter & Stegemoller (2002), the time window that starts 2 days before the announcement and ends 2 days after the announcement is an appropriate measure to capture the price effect of such an event.

6.1 Limitations

One of the main limitations of the data I gathered is that I can't distinguish between a very large blockholder and a small blockholder. Every shareholder that has a stake of over 5% is considered a blockholder in this thesis. An area for future research is therefore a more in depth-analysis of the effect of blockholder dispersion and the amount of shares of the largest shareholder on the M&A performance of the acquiring firm.

Another limitation of this study is the amount of observations. Due to several merges with corporate governance data, many observations have been deleted due to missing data. Especially for the regressions with subsamples of the data this could improve the significance of the results drastically.

Furthermore, it should be noted that some of the corporate governance variables are only available bi-annually for the period between 2003 and 2006. For the missing values I have assumed that the data is the same as the year after.

Also, for the CEO tenure variable, I only look at the years this person is active in his current position. I don't account for the fact that this person could have been active as a CEO at another company before his tenure at the current company. Also, it could be that this person was already a board member for the current company for many years, but not as CEO yet, this could influence the results.

Finally, endogeneity issues could also influence my results. One form of an endogeneity problem is reverse causality, which could mean for example that a bad M&A performance, triggers management to hire more independent directors instead of more independent directors leading to a worse M&A performance. This prevents me from making definitive conclusions about the causation of M&A performance.

7. Conclusion

This thesis examines how the corporate governance structure of a company influences their short-run M&A performance. Having a solid corporate governance structure in place potentially reduces the agency conflict, by limiting the opportunity of self-serving behaviour by CEO or management, which in turn could lead to a maximization of shareholder value. The observed mergers in this paper take place between 2003 and 2014, which is the period right after the introduction of the Sarbanes-Oxley act in 2002.

The results of the main regressions indicate that although the coefficients of most independent variables have the sign that I expect from economic theory, they show an insignificant relation to the short-run merger performance of the acquiring firm. This leads me to rejecting all six sub-hypotheses and as a consequence also rejecting the main hypothesis that a 'strong' corporate governance structure results in a better M&A performance of the acquiring firm. It should be noted that hypothesis 3B, regarding the effect of blockholders on the acquiring firms' M&A performance, deserves some further attention. The variable that measures the number of blockholders of the acquiring company is the only independent variable that shows a significant relation to M&A performance. However this relation is negative, which is contrary to what I expect from economic theory. A possible explanation is that having more 'smaller' blockholders at a company could lead to a free-rider problem in which the smaller blockholder doesn't monitor management and CEO at all, in the hope that the other blockholders will do this for him. In that scenario a company with fewer but larger

shareholders is better capable in monitoring the CEO and management, which would lead to a higher abnormal merger announcement return. However, the validation of this theory requires future research.

Furthermore, there are several subsamples of the data that do show significant relations between a company's corporate governance structure and its M&A performance. From the regressions that include an interaction term with board independence, I find two instances in which board independence has a significant effect on M&A performance. For mergers where the CEO tenure is less than 10 years, adding more independent directors to the board has a negative and significant effect on the M&A performance. Also for mergers where the target firm is either a public or a private firm, adding more independent directors to the board has a negative and significant effect on the M&A performance. However this result is only significant for the regressions that include 5 independent variables, therefore this effect is too weak to conclude that a reduction of the number of independent directors in these cases increases a company's M&A performance. It might be interesting for future studies to try to determine the optimal level of board independence and link this to firm value or a company's M&A performance.

From the subsamples that are based on size and investor sentiment, I find that the effect of blockholders on a company's M&A performance is only significant for companies that have a below median market capitalization (smaller companies) and for the mergers that take place in a period of low investor sentiment. A possible topic for future research might be investigating why the influence of blockholders on a company's M&A performance is limited to these subsamples.

Also, in the subsample of the data where the dynamic measure of investor sentiment is low, I find a significant relation between one of the other independent variables, besides the number of blockholders, and the M&A performance of the acquiring firm. In this subsample I find a negative relation between CEO duality and the CAR of the merger announcement. Which indicates that in period of low investor sentiment, having the same person as CEO and chairman of the board decreases the merger performance of the acquiring firm. Furthermore, in this subsample I find a positive relation between the corporate governance index and the CAR of the merger announcement. This is mostly due to the anti-takeover defense provisions included in this index. In a period of low investor sentiment, having more takeover defenses is considered positive by the market, which translates in a higher merger abnormal announcement return.

In conclusion, the results of this paper don't give decisive evidence that a better corporate governance structure lead to an improvement of a company's M&A performance. However several subsamples show promising areas in which a company might improve its governance structure in order to achieve better M&A results, but future studies are necessary to further investigate these claims.

8. Appendix

Table 1
Sample Distribution by Year

The sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This data was gathered from the Thomson One Banker database and includes: year of merger announcement, number of acquisitions in this year, percentage of all mergers in the sample, mean market cap of acquirer, mean deal value and mean deal value as a percentage of the market cap.

Year	Number of Acquisitions	% of Sample	Mean Market Cap (\$mil)	Mean Deal Value (\$mil)	Mean Deal Value as % of Market Cap
2003	134	6,6%	9.445	815	10,8%
2004	141	7,0%	6.706	855	11,5%
2005	156	7,7%	13.251	1.385	11,1%
2006	172	8,5%	15.978	1.575	10,6%
2007	151	7,5%	8.043	524	9,5%
2008	129	6,4%	10.556	1.027	9,0%
2009	91	4,5%	15.455	1.460	13,0%
2010	197	9,7%	11.561	715	10,3%
2011	204	10,1%	7.366	739	10,9%
2012	213	10,5%	8.145	617	12,5%
2013	194	9,6%	9.257	681	13,2%
2014	240	11,9%	10.306	1.156	13,6%
Total	2022	100,0%	10.284	937	11,4%

Table 2
Announcement Returns (CAR) for Several Subsamples

The sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. The event window used to calculate the cumulative abnormal returns (CAR) starts 2 trading days before the merger and ends 2 trading days after the merger. Mean, median and standard deviation are given in percentages. *, ** and *** stand for the statistical significance based on two-sided t-tests on the 10%, 5% and 1% level, respectively.

Panel A: CAR Distribution by Acquirer Size and Crisis Years

		Entire sample	Below Median Market Cap.	Above Median Market Cap.	Years Before Financial Crisis (2003-2007)	Years After Financial Crisis (2008- 2014)
CAR in	Mean	0,57 ^{***}	1,08 ^{***}	0,06	0,70 ^{***}	0,35 ^{**}
%	Median	0,30	0,73	-0,01	0,38	0,21
(-2, +2)	Std. Dev.	5,20	5,61	4,71	5,46	4,74
	N	2.022	1.011	1.011	1.268	754

Panel B: CAR Distribution by Characteristics Target

		Entire sample	Private Target	Public Target	Subsidiary Target
CAR in	Mean	0,57 ^{***}	0,52 ^{***}	-0,34 [*]	1,18 ^{***}
%	Median	0,30	0,35	-0,36	0,80
(-2, +2)	Std. Dev.	5,20	4,98	5,21	5,38
	N	2.022	874	428	720

Panel C: CAR Distribution by Method of Payment

		Entire sample	Cash offer	Stock offer	Hybrid Offer
CAR in	Mean	0,57 ^{***}	0,85 ^{***}	-1,32 ^{**}	0,28
%	Median	0,30	0,42	-0,90	0,06
(-2, +2)	Std. Dev.	5,20	5,22	5,91	6,33
	N	2.022	1.046	88	230

Table 3
Summary Statistics

The full sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. The sample for CEO tenure, CEO duality and blockholders consists of respectively 956, 956 and 1298 completed mergers and acquisitions. This is smaller due to merges with several datasets that do not contain data on the full sample of mergers and acquisitions. The variable description can be found in the Methodology chapter.

Panel A: Dependant Variable

	N	Mean	Std. Dev	Q1	Median	Q3
CAR	2.022	0,57%	5,20%	-1,93%	0,30%	2,88%

Panel B: Independent Variables

	N	Mean	Std. Dev	Q1	Median	Q3
Board Independence	2.022	76,17%	12,42%	66,67%	77,78%	87,50%
Board Size	2.022	9,53	2,57	8	9	11
CEO Tenure	956	9,78	8,23	4	7	14
CEO Duality	956	58,68%	49,27%	0	1	1
Corporate Governance Index	2.022	1,58	0,87	1	2	2
Blockholders	1.298	2,61	1,35	2	2	3

Panel C: Control Variables

	N	Mean	Std. Dev	Q1	Median	Q3
Industry Relatedness	2.022	67,21%	46,96%	0	1	1
Private Target	2.022	43,22%	49,55%	0	0	1
Public Target	2.022	21,17%	40,86%	0	0	0
Subsidiary Target	2.022	35,61%	47,90%	0	0	1
Paid in Cash	2.022	51,73%	49,98%	0	1	1
Paid in Stock	2.022	4,35%	20,41%	0	0	0
Paid with Hybrid of Stocks - and Cash	2.022	11,37%	31,76%	0	0	0
Size Acquirer (\$mil)	2.022	10.284	24.168	1.154	2.610	8.609
Deal Value	2.022	937	3.838	60	182	501
Tobin's Q	2.022	1,84	1,02	1,19	1,54	2,12
Leverage	2.022	0,09	0,18	-0,02	0,08	0,19
Liquidity Factor	2.022	-0,02	0,06	-0,04	-0,01	0,02

Table 4
Baseline Regression Results

The full sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression with 3 independent variables, column 2 contains the regression with 5 independent variables and column 3 contains the regression with all 6 independent variables.

	(1)	(2)	(3)
Blockholders			-0.003 (1.96)**
CEO Tenure		0.003 (0.78)	0.005 (1.38)
CEO Duality		-0.001 (0.21)	-0.003 (0.72)
Board Independence	0.010 (1.18)	-0.018 (1.45)	-0.012 (0.87)
Board Size	0.000 (0.55)	0.000 (0.40)	-0.000 (0.18)
Corporate Governance Index	-0.002 (1.39)	-0.001 (0.74)	-0.000 (0.07)
Industry Relatedness	-0.003 (1.33)	-0.000 (0.06)	-0.001 (0.14)
Private Target	-0.006 (2.27)**	-0.008 (2.29)**	-0.007 (1.91)*
Public Target	-0.013 (3.53)***	-0.014 (2.75)***	-0.018 (2.97)***
Log (Size Acquirer)	-0.008 (4.90)***	-0.006 (2.72)***	-0.009 (3.39)***
Paid in Stocks	-0.014 (2.02)**	-0.034 (3.24)***	-0.033 (2.42)**
Paid in Cash	0.006 (2.32)**	0.003 (0.81)	0.004 (1.05)
Log (Deal Value)	0.004 (2.59)***	0.004 (1.76)*	0.005 (2.22)**
Tobin's Q	-0.002 (1.05)	-0.005 (2.45)**	-0.005 (2.05)**
Leverage	-0.005 (0.65)	-0.003 (0.26)	-0.007 (0.60)
Liquidity factor	0.056 (2.56)**	0.064 (1.87)*	0.068 (1.91)*
Intercept	0.050 (4.67)***	0.068 (4.05)***	0.084 (4.14)***
R^2	0.04	0.06	0.07
N	2,022	956	855

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 5
Regression Results with Yearly Fixed Effects

The full sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. Robust standard errors are used to control for heterogeneity. Also, in this regression is controlled for yearly fixed effects. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression with 3 independent variables, column 2 contains the regression with 5 independent variables and column 3 contains the regression with all 6 independent variables.

	(1)	(2)	(3)
Blockholders			-0.003 (2.43)**
CEO tenure		0.003 (0.65)	0.005 (1.13)
CEO duality		-0.000 (0.21)	-0.002 (0.90)
Board Independence	0.010 (1.07)	-0.016 (1.57)	-0.009 (0.89)
Board Size	0.000 (0.56)	0.000 (0.51)	-0.000 (0.05)
Corporate Governance Index	-0.002 (0.95)	-0.001 (0.65)	-0.000 (0.15)
Industry Relatedness	-0.003 (1.16)	-0.000 (0.08)	-0.001 (0.15)
Private Target	-0.006 (2.31)**	-0.008 (2.22)**	-0.007 (1.82)*
Public Target	-0.013 (2.88)**	-0.014 (2.07)*	-0.017 (2.38)**
Log (Size Acquirer (\$mil))	-0.008 (4.58)***	-0.006 (2.43)**	-0.009 (3.61)***
Paid in Stocks	-0.015 (2.29)**	-0.034 (3.02)**	-0.033 (2.50)**
Paid in Cash	0.006 (3.06)**	0.003 (0.90)	0.004 (1.50)
Log (Deal Value (\$mil))	0.004 (2.28)**	0.004 (1.40)	0.005 (2.00)*
Tobin's Q	-0.002 (1.85)*	-0.005 (3.64)***	-0.005 (2.92)**
Leverage	-0.004 (0.62)	-0.003 (0.31)	-0.006 (0.68)
Liquidity factor	0.039 (1.33)	0.058 (1.33)	0.063 (1.35)
Intercept	0.050 (5.03)***	0.067 (5.26)***	0.086 (4.26)***
R^2	0.04	0.06	0.07
N	2,022	956	855

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 6
Subsample Regression Results based on Size

The sample consists of 855 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This regression includes all 6 independent variables. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression with a below median market capitalization (of the acquirer) and column 2 contains the regression with an above median market capitalization (of the acquirer).

	(1)	(2)
Board Independence	-0.011 (0.52)	-0.005 (0.33)
Board Size	-0.001 (0.81)	0.001 (0.72)
CEO tenure	0.007 (1.23)	0.005 (0.97)
CEO duality	-0.005 (0.96)	0.001 (0.30)
Corporate Governance Index	-0.000 (0.01)	-0.002 (0.91)
Blockholders	-0.004 (2.14)**	-0.001 (0.52)
Industry Relatedness	-0.001 (0.10)	-0.000 (0.06)
Private Target	-0.014 (2.26)**	0.002 (0.36)
Public Target	-0.032 (2.84)***	-0.007 (0.91)
Log (Size Acquirer)	-0.009 (1.66)*	-0.009 (2.31)**
Paid in Stocks	-0.048 (1.96)*	-0.013 (0.94)
Paid in Cash	-0.003 (0.46)	0.010 (2.03)**
Log (Deal Value)	0.006 (1.72)*	0.004 (1.26)
Tobin's Q	-0.000 (0.04)	-0.007 (2.58)**
Leverage	-0.011 (0.70)	-0.001 (0.07)
Liquidity factor	0.001 (0.03)	0.159 (3.05)***
Intercept	0.096 (2.48)**	0.071 (2.23)**
R^2	0.08	0.10
N	428	427

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 7
Subsample Regression Results based on Static Time Period

The sample consists of 855 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This regression includes all 6 independent variables. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression with all the mergers that were announced between 2003-2007 (merger wave) and column 2 contains the regression with all the mergers that were announced between 2008-2014 (financial crisis).

	(1)	(2)
Board Independence	-0.012 (0.74)	-0.017 (0.52)
Board Size	0.001 (0.94)	-0.001 (0.78)
CEO tenure	0.007 (1.29)	0.003 (0.60)
CEO duality	-0.001 (0.27)	-0.001 (0.17)
Corporate Governance Index	0.002 (0.64)	-0.002 (0.66)
Blockholders	-0.001 (0.31)	-0.004 (2.00)**
Industry Relatedness	0.002 (0.30)	-0.002 (0.31)
Private Target	-0.005 (1.03)	-0.007 (1.31)
Public Target	-0.014 (1.75)*	-0.015 (1.79)*
Log (Size Acquirer)	-0.006 (1.84)*	-0.012 (3.02)***
Paid in Stocks	-0.019 (1.35)	-0.056 (2.19)**
Paid in Cash	0.004 (0.81)	0.003 (0.54)
Log (Deal Value)	0.001 (0.51)	0.008 (2.17)**
Tobin's Q	-0.006 (1.84)*	-0.003 (0.92)
Leverage	-0.026 (1.53)	0.013 (0.88)
Liquidity factor	-0.018 (0.34)	0.117 (2.46)**
Intercept	0.057 (2.32)**	0.111 (2.83)***
R^2	0.08	0.10
N	391	464

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 8
Subsample Regression Results based on Dynamic Time Period

The sample consists of 855 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This regression includes all 6 independent variables. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression with all the mergers where the CAR of the previous 50 mergers > 0 (high investor sentiment) and column 2 contains the regression with all the mergers where the CAR of the previous 50 mergers < 0 (low investor sentiment).

	(1)	(2)
Board Independence	-0.017 (1.05)	-0.002 (0.08)
Board Size	-0.000 (0.05)	-0.001 (0.55)
CEO tenure	0.002 (0.38)	0.010 (1.34)
CEO duality	0.001 (0.21)	-0.011 (1.74)*
Corporate Governance Index	-0.002 (0.76)	0.006 (1.70)*
Blockholders	-0.002 (0.94)	-0.005 (2.10)**
Industry Relatedness	0.001 (0.13)	-0.006 (0.78)
Private Target	-0.006 (1.30)	-0.010 (1.37)
Public Target	-0.016 (2.32)**	-0.021 (1.74)*
Log (Size Acquirer)	-0.011 (3.58)***	-0.003 (0.69)
Paid in Stocks	-0.035 (2.38)**	-0.023 (0.79)
Paid in Cash	0.004 (0.84)	0.003 (0.49)
Log (Deal Value)	0.006 (2.42)**	0.001 (0.17)
Tobin's Q	-0.004 (1.33)	-0.006 (1.73)*
Leverage	-0.005 (0.36)	-0.005 (0.22)
Liquidity factor	0.069 (1.52)	0.070 (1.23)
Intercept	0.093 (3.75)***	0.069 (2.15)**
R^2	0.08	0.11
N	621	234

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 9
Subsample regression results with Board Independence interaction term

The sample consists of 956 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This regression includes 5 independent variables and an interaction term for board independence. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression that interacts with CEO tenure (>10 years) and column 2 contains the regression that interacts with the dummy variable for a subsidiary M&A target

	(1)	(2)
Board Independence*CEO tenure (dummy)	0.021 (0.83)	
Board Independence*Subsidiary target		0.028 (1.03)
Board Independence	-0.026 (1.67)*	-0.029 (1.92)*
Board Size	0.000 (0.41)	0.000 (0.47)
CEO tenure (dummy)	-0.014 (0.69)	0.002 (0.73)
CEO duality	-0.001 (0.17)	-0.001 (0.17)
Corporate Governance Index	-0.002 (0.76)	-0.002 (0.79)
Industry Relatedness	-0.000 (0.08)	-0.000 (0.08)
Private Target	-0.008 (2.23)**	0.013 (0.62)
Public Target	-0.015 (2.75)***	0.007 (0.33)
Log (Size Acquirer)	-0.006 (2.71)***	-0.006 (2.76)***
Paid in Stocks	-0.034 (3.24)***	-0.035 (3.29)***
Paid in Cash	0.003 (0.85)	0.003 (0.85)
Log (Deal Value)	0.004 (1.75)*	0.004 (1.75)*
Tobin's Q	-0.005 (2.46)**	-0.005 (2.45)**
Leverage	-0.003 (0.26)	-0.003 (0.29)
Liquidity factor	0.064 (1.87)*	0.064 (1.89)*
Intercept	0.074 (4.27)***	0.055 (2.37)**
R^2	0.06	0.07
N	956	956

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 10
Regression Results with Independent Variables as Separate Regression

The full sample consists of 2022 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1-6 contain the regression results with each independent variable in a separate regression in order to avoid multicollinearity

	(1)	(2)	(3)	(4)	(5)	(6)
Board independence	0.010 (1.14)					
Board Size		0.000 (0.49)				
CEO tenure			-0.002 (1.32)			
CEO duality				0.003 (0.90)		
Corporate Governance Index					-0.000 (0.07)	
Blockholders						-0.003 (1.98)**
Industry Relatedness	-0.004 (1.41)	-0.004 (1.40)	-0.003 (1.34)	-0.001 (0.14)	-0.001 (0.18)	-0.001 (0.26)
Private Target	-0.006 (2.20)**	-0.006 (2.20)**	-0.006 (2.25)**	-0.008 (2.21)**	-0.008 (2.24)**	-0.007 (1.87)*
Public Target	-0.013 (3.48)***	-0.013 (3.49)***	-0.013 (3.49)***	-0.014 (2.74)***	-0.014 (2.73)***	-0.017 (2.96)***
Log (Size Acquirer)	-0.007 (4.90)***	-0.007 (4.71)***	-0.007 (4.91)***	-0.006 (2.96)***	-0.006 (2.91)***	-0.009 (3.83)***
Paid in Stocks	-0.014 (1.98)**	-0.015 (2.07)**	-0.014 (2.05)**	-0.032 (3.06)***	-0.032 (3.07)***	-0.032 (2.38)**
Paid in Cash	0.006 (2.27)**	0.006 (2.30)**	0.006 (2.33)**	0.003 (0.85)	0.003 (0.82)	0.004 (1.00)
Log (Deal Value)	0.004 (2.58)**	0.004 (2.60)***	0.004 (2.61)***	0.004 (1.78)*	0.004 (1.75)*	0.005 (2.17)**
Tobin's Q	-0.002 (1.17)	-0.002 (1.10)	-0.002 (1.22)	-0.005 (2.56)**	-0.005 (2.52)**	-0.004 (1.86)*
Leverage	-0.005 (0.64)	-0.005 (0.71)	-0.005 (0.74)	-0.002 (0.22)	-0.001 (0.11)	-0.004 (0.37)
Liquidity factor	0.055 (2.52)**	0.056 (2.52)**	0.056 (2.55)**	0.064 (1.87)*	0.064 (1.89)*	0.069 (1.95)*
Intercept	0.047 (4.70)***	0.052 (6.60)***	0.057 (6.58)***	0.052 (4.48)***	0.054 (4.61)***	0.078 (4.90)***
R^2	0.04	0.04	0.04	0.06	0.06	0.07
N	2,022	2,022	2,022	956	956	855

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 11
CEO tenure, frequency table

The sample consists of 956 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This table shows the distribution of the tenure of the CEO's in this sample. The distribution is skewed to the right. Roughly 38% of the CEO's have a tenure of less than 5 years, roughly 65% have a tenure of less than 10 years and around 80% of the CEO's have a tenure of less than 15 years.

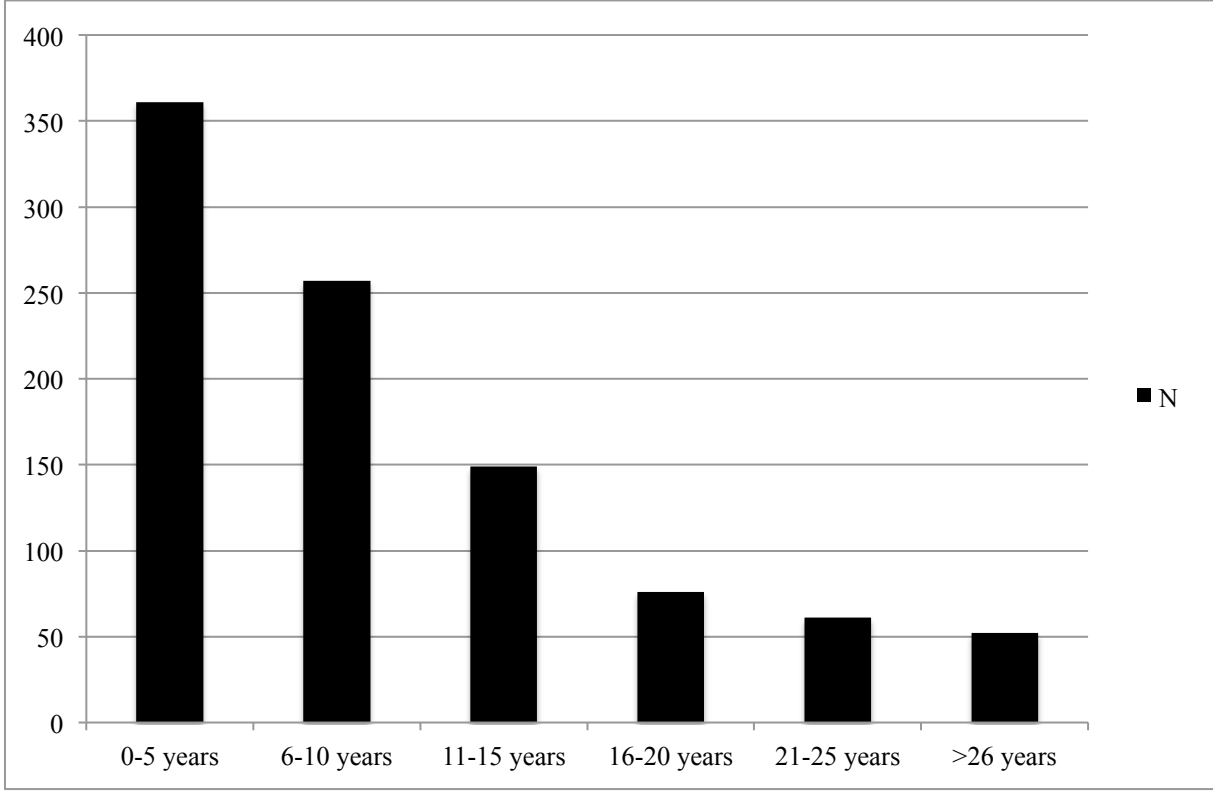


Table 12
Regression Results with different CEO tenure

The sample consists of 956 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. Column 1 contains the regression where the CEO is entrenched after a tenure of 5 years, column 2 contains the regression where the CEO is entrenched after a tenure of 10 years and column 3 contains the regression where the CEO is entrenched after a tenure of 15 years.

	(1)	(2)	(3)
CEO tenure	0.000 (0.03)	0.003 (0.78)	0.001 (0.24)
CEO duality	-0.000 (0.01)	-0.001 (0.21)	-0.000 (0.07)
Board Independence	-0.018 (1.46)	-0.018 (1.45)	-0.018 (1.42)
Board Size	0.000 (0.32)	0.000 (0.40)	0.000 (0.34)
Corporate Governance Index	-0.002 (0.87)	-0.001 (0.74)	-0.002 (0.86)
Industry Relatedness	-0.000 (0.09)	-0.000 (0.06)	-0.000 (0.07)
Private Target	-0.008 (2.30)**	-0.008 (2.29)**	-0.008 (2.29)**
Public Target	-0.014 (2.73)***	-0.014 (2.75)***	-0.014 (2.74)***
Log (Size Acquirer)	-0.006 (2.72)***	-0.006 (2.72)***	-0.006 (2.74)***
Paid in Stocks	-0.034 (3.24)***	-0.034 (3.24)***	-0.034 (3.24)***
Paid in Cash	0.003 (0.77)	0.003 (0.81)	0.003 (0.78)
Log (Deal Value)	0.004 (1.73)*	0.004 (1.76)*	0.004 (1.72)*
Tobin's Q	-0.005 (2.42)**	-0.005 (2.45)**	-0.005 (2.42)**
Leverage	-0.002 (0.16)	-0.003 (0.26)	-0.002 (0.17)
Liquidity factor	0.064 (1.88)*	0.064 (1.87)*	0.064 (1.87)*
Intercept	0.070 (4.06)***	0.068 (4.05)***	0.069 (4.13)***
R^2	0.06	0.06	0.06
N	956	956	956

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 13**Subsample Regression Results with different Governance Index**

The sample consists of 234 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. This regression includes all 6 independent variables. Robust standard errors are used to control for heterogeneity. The dependent variable is the 5-day cumulative abnormal announcement return (CAR) in percentage points. This sample contains the regressions with all the mergers where the CAR of the previous 50 mergers < 0 (low investor sentiment). Column 1 shows the regression with the normal corporate governance index, whereas column 2 shows the regression with the index that only includes the anti-takeover provisions (this excludes the staggered board variable).

	(1)	(2)
Corporate Governance Index	0.006 (1.70)*	
Anti-takeover Defence Index		0.010 (2.10)**
Board Independence	-0.002 (0.08)	-0.006 (0.22)
Board Size	-0.001 (0.55)	-0.001 (0.52)
CEO tenure	0.010 (1.34)	0.011 (1.51)
CEO duality	-0.011 (1.74)*	-0.011 (1.78)*
Blockholders	-0.005 (2.10)**	-0.005 (2.15)**
Industry Relatedness	-0.006 (0.78)	-0.005 (0.77)
Private Target	-0.010 (1.37)	-0.010 (1.43)
Public Target	-0.021 (1.74)*	-0.022 (1.87)*
Log (Size Acquirer)	-0.003 (0.69)	-0.003 (0.68)
Paid in Stocks	-0.023 (0.79)	-0.021 (0.74)
Paid in Cash	0.003 (0.49)	0.003 (0.40)
Log (Deal Value)	0.001 (0.17)	0.001 (0.27)
Tobin's Q	-0.006 (1.73)*	-0.007 (1.84)*
Leverage	-0.005 (0.22)	-0.009 (0.39)
Liquidity factor	0.070 (1.23)	0.064 (1.13)
Intercept	0.069 (2.15)**	0.069 (2.16)**
R^2	0.11	0.11
N	234	234

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table 14
Pearson Correlation Matrix

The full sample consists of 855 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. *, ** and *** stand for the statistical significance based on two-sided t-tests on the 10%, 5% and 1% level, respectively.

	CAR	Board Independence	Board Size	CEO Tenure	CEO Duality	Corp. Gov. Index	Blockholders	Industry Relatedness	Private Target
CAR	1,00								
Board Independence	-0,05	1,00							
Board Size	-0,06	0,09***	1,00						
CEO Tenure	0,02	-0,16***	-0,14***	1,00					
CEO Duality	-0,02	0,01	0,02	0,31***	1,00				
Corp. Gov. Index	0,01	0,02	-0,06*	-0,21***	0,09***	1,00			
Blockholders	-0,01	0,04	-0,15***	0,03	-0,11***	-0,03	1,00		
Industry Relatedness	0,00	0,03	0,02	-0,05	0,01	0,05	0,00	1,00	
Private Target	-0,01	-0,05	-0,17***	0,04	-0,12***	-0,07*	0,12***	0,06*	1,00
Public Target	-0,12***	0,04	0,20***	-0,06*	0,03	-0,02	-0,12***	-0,09**	-0,42***
Subsidiary Target	0,10***	0,03	0,02	0,00	0,10***	0,08**	-0,02	0,00	-0,71***
Paid in Cash	0,03	0,02	-0,10***	-0,04	-0,01	0,00	0,05	0,03	-0,01
Paid in Stock	-0,11***	-0,08**	0,11***	-0,01	-0,03	-0,02	-0,03	-0,03	-0,11***
Paid with Hybrid	-0,02	0,03	0,07**	0,07*	0,05	-0,05	-0,05	-0,08**	0,00
Size Acquirer	-0,09***	0,14***	0,33***	-0,09**	0,13***	-0,16***	-0,25***	-0,03	-0,17***
Deal Value	-0,08**	0,05	0,24***	-0,07*	0,06*	-0,04	-0,14***	-0,11***	-0,18***
Tobins' Q	-0,11***	-0,01	-0,14***	0,03	0,01	-0,01	-0,11***	-0,07*	0,03
Leverage	-0,01	0,00	0,19***	0,05	0,05	0,00	-0,07*	0,05	-0,08**
Liquidity Factor	0,08**	0,02	0,03	0,04	-0,01	0,00	-0,02	0,06	-0,01

Table 14 Continued
Pearson Correlation Matrix

The full sample consists of 855 completed mergers and acquisitions made by U.S. firms between 2003 and 2014. *, ** and *** stand for the statistical significance based on two-sided t-tests on the 10%, 5% and 1% level, respectively.

	Public Target	Subsidiary Target	Paid in Cash	Paid in Stock	Paid with Hybrid	Size Acquirer	Deal Value	Tobin's Q	Leverage	Liquidity Factor
Public Target	1,00									
Subsidiary-Target	-0,34***	1,00								
Paid in Cash	0,01	0,01	1,00							
Paid in Stock	0,25***	-0,08**	-0,19***	1,00						
Paid with Hybrid	0,17***	-0,13***	-0,36***	-0,05	1,00					
Size Acquirer	0,27***	-0,03	-0,02	0,03	0,10***	1,00				
Deal Value	0,34***	-0,08***	-0,11***	0,17***	0,18***	0,62***	1,00			
Tobin's Q	0,06*	-0,08**	0,07**	-0,04	0,05	0,17***	-0,01	1,00		
Leverage	-0,05	0,12***	-0,17***	-0,04	-0,01	0,02	0,07**	-0,27***	1,00	
Liquidity Factor	-0,01	0,02	-0,04	-0,01	-0,01	0,03	-0,01	0,02	-0,05	1,00

9. References

- Alexandridis, G., Fuller, K. P., Terhaar, L., & Travlos, N. G. (2013). Deal size, acquisition premia and shareholder gains, *Journal of Corporate Finance*, 20(C), 1-13.
- Bebchuk, L., Cohen, A., & Ferrell, A. (2009). What matters in corporate governance?. *The Review of Financial Studies*, 22(2), 783-827.
- Berger, P. G., & Ofek, E. (1995). Diversification's effect on firm value, *Journal of Financial Economics*, 37(1), 39-65
- Brickley, J., Coles, J. & Jarrell, G. (1997). Leadership structure: separating the CEO and chairman of the board. *Journal of Corporate Finance*, 3, 189-220.
- Capron, L. & Shen, J. C. (2007). Acquisitions of private vs. public firms: private information, target selection, and acquirer returns. *Strategic Management Journal*, 28, 891–911.
- Core, J. E., Holthausen, R.W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51, 371–406.
- Dolley, J. C. (1933). Characteristics and procedure of common stock split-ups. *Harvard Business Review*, 11, 316–326.
- Durnev, A., Kim, E. H. (2005). To steal or not to steal: firm attributes, legal environment, and valuation. *The Journal of Finance*, 60(3), 1461-1493.
- Edmans, A. (2014). Blockholders and corporate governance. *Annual Review of Financial Economics*, 6(1), 23-50
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The journal of Finance*, 25(2), 383-417.
- Fama, E. F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.
- Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International economic review*, 10(1), 1-21.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of financial economics*, 33(1), 3-56.
- Franks, J., Harris, R., & Titman, S. (1991). The postmerger share-price performance of acquiring firms. *Journal of Financial Economics*, 29(1), 81-96
- Fuller, K., Netter, J., & Stegemoller, M. (2002). What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *The Journal of Finance*, 57(4),

1763-1793.

- Gompers, P. A., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118(1), 107–155.
- Guest, P. M., (2009). The impact of board size on firm performance: evidence from the UK. *European Journal of Finance*, 15, 385-404.
- Hermalin, B. E. & Weisbach, M.S. (1991). The effects of board composition and direct incentives on firm performance. *The Journal of the Financial Management Association*, 20, 101-112.
- Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review*, 88(1), 96–118.
- Hermalin, B. E., & Weisbach, M.S. (2003). Boards of directors as an endogenously determined institution: A survey of the economic literature, *FRTNY Economic Policy Review*, 9, 7–26.
- Jarrell, G. A., & Poulsen, A. B. (1987). Shark repellents and stock prices: the effects of antitakeover amendments since 1980. *Journal of Financial Economics*, 19, 127-168.
- Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics*, 11, 5–50.
- Lang, L. H. P., Stulz, R. M., & Walkling, R. A., (1989). Managerial performance, tobin's q, and the gains from successful tender offers. *Journal of Finance*, 24, 137-154.
- Lehn, K. M., Patro, S. and Zhao, M. (2009). Determinants of the size and composition of US corporate boards: 1935-2000. *Financial Management*, 38, 747–780.
- Lehn, K., & Poulsen, A. (1989). Free cash flow and stockholder gains in going private transactions. *The Journal of Finance*, 44(3), 771-787.
- Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *Business Lawyer*, 48, 59- 77.
- Konijn, S. J., Kräussl, R., & Lucas, A. (2011). Blockholder dispersion and firm value. *Journal of Corporate Finance*, 17(5), 1330-1339.
- MacKinlay, A. C. (1997). Event studies in economics and finance. *Journal of economic literature*, 35(1), 13-39.
- Martin, K. J. (1996). The method of payment in corporate acquisitions, investment opportunities, and management ownership. *Journal of Finance*, 51(4), 1227-1246.
- Masulis, R. W., Wang, C. & Xie, F. (2007). Corporate Governance and Acquirer Returns. *The Journal of Finance*, 62(4), 1851–1889.
- Mehran, H. (1995). Executive compensation structure, ownership, and firm performance,

- Journal of Financial Economics*, 38(2), 163-184.
- Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions, *Journal of Financial Economics*, 73, 201–228.
- Myers, S. C. (1984). Capital structure puzzle. *Journal of Finance*, 39(3), 575-592.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
- Pástor, L., & Stambaugh, R. F. (2003). Liquidity risk and expected stock returns. *Journal of Political economy*, 111(3), 642-685.
- Rosen, R. J. (2006). Merger Momentum and Investor Sentiment: The Stock Market Reaction to Merger Announcements. *The Journal of Business*, 79(2), 987-1017.
- Servaes, H. (1991). Tobin's q and the gains from takeover, *Journal of Finance* 46, 409–419.