

Corporate Governance and M&A: An Empirical Study on how the Number of Blockholders, CEO Remuneration Schemes and the Board of Directors relate to M&A Deal Performance

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#### **Abstract**

This study aims to connect the topics Corporate Governance and Mergers & Acquisitions (M&A). As a result of the fact that most M&A deals end up failing, this study has tried to gain some more insight into the problem in order gain a potential solution. In order to do so, this study has tested how the number of blockholders, the board of directors and CEO remuneration schemes relate to M&A deal performance, measured by the cumulative abnormal returns to acquiring-firm shareholders surrounding M&A announcements. Data for this study has been retrieved from several data sources and contains 148 U.S. based domestic M&A deal observations over the period 2007 - 2011. Based on several regression models, evidence has been found for a positive impact of CEO stock option ownership as well as of certain board independence levels. As a result of this study, new knowledge has been added to the research field of both, corporate governance as well as M&A and in practice this study adds value as based on the results, firms will be able to adjust their corporate governance structure in order to improve their M&A deal performance.

Key Words: Mergers and Acquisitions (M&A), Corporate Governance, Blockholders, Board of Directors, CEO Remuneration

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# **Preface**

During last couple of months, I have been working on this study in order to successfully complete my Masters in Entrepreneurship & Strategy Economics. While there were some ups and downs during the writing process, especially with regards to the data collection, I can say in the end that I am very pleased with the results. I also want to thank some people for the assistance during this whole process. First of all, my supervisor Jolanda Hessels, who provided me with valuable feedback. Next, I would like to thank my co-reader Ronald de Vlaming for his input and lastly I want to thank my friends and family for their support.

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#### 1. Introduction

In the last couple of decades, ample attention has been paid to Mergers & Acquisitions (M&A) deals (Barkema and Schijven, 2008) not only from an academic research field, but also from the business world as well as from the media. As the business environment has become more and more dynamic, firms need to grow in order to survive. Next to growing organically, a popular growth strategy can be found in performing acquisitions (Barkema and Schijven, 2008). As a result, research has tried to study the performance of M&A in order to justify this growth strategy. Although the majority of this research shows a positive impact of an M&A deal announcement on the shareholder value of the targeted firm, less conclusive results have been found with regards to the impact on the shareholder value of the acquiring firm (e.g. Asquith, Bruner and Mullins, 1983; Jensen and Ruback, 1983; Berkovitch and Narayanan, 1993; Roll, 1986; Bradley, Desai and Kim, 1988; Andrade Mitchell and Stafford, 2001; Moeller, Schlingemann and Stulz, 2004). While some studies show a slight positive value effect, most other studies reveal a neutral or even negative effect on the shareholder value of the acquiring firm (e.g. Asquith et al., 1983; Andrade et al., 2001; Moeller et al., 2004). According to existing literature there are different explanations for these negative results. One of these reasons is connected to an excessive amount of available cash flows (Jensen, 1986). Due to cash flow availability, directors will more easily spend money and in result even targets with less potential will be acquired compared to the situation in which there is less money available to be spent. This is because a restricted budget makes directors more critical on potential targets (Jensen, 1986). Other explanations are rather managerial or related to CEO overconfidence (Roll, 1986; Hayward and Hambrick, 1997), as well as the fact that CEOs use the firm for their own gain, such as the justification of a higher CEO pay (Kroll et al., 1997; Jensen, 1986) and power (Jensen, 1986), even though they do not own the firm (Bertrand and Mullainathan, 2000). As the primary goal of a firm should be the maximization of a firm's market value, one can argue that the value destroying acquisitions interfere with this goal (Jensen, 2001).

Another explanation for these value destroying acquisitions can be given through the so-called 'agency problems' (Jensen, 1986; Morck et al., 1988). The agency relationship within listed firms exists due to a separation of ownership and control (Berle and Means, 1932). Due to the fact that shareholders cannot manage the firm themselves, they assign an executive board to perform this task on their behalf. Within this separation, the board of directors of a firm will act as the 'agent', whilst the shareholders can be seen as the 'principals'. Whereas on the one hand the goal of a shareholder consists of maximizing firm

value, on the other hand the goal of the board of directors is to achieve as much personal gains as possible. These two goals can lead to a misalignment of interests. The agent might take decisions, which are not preferred by and in line with the interests of the principals, resulting in the so-called 'agency problem' (Jensen and Meckling, 1976). Therefore, one might expect that the misalignment of interests could lead to value destroying acquisitions as the board of directors could act in their own interest instead of that of the shareholders.

In the '80s, multiple business scandals have led governments to (re)assess their designs with regards to corporate governance codes. These corporate governance codes can be seen as ways to limit the agency problems, as they ensure that shareholders will receive reliable information on a firm's performance. This provides the shareholders with a possibility to monitor the board of directors and to see whether they do not defraud them of the investments' value (Bushman and Smith, 2001). More specifically, the concept of corporate governance exists of several mechanisms, such as large shareholders, board of directors and board incentive schemes (Shleifer and Vishny, 1997). The Agency Theory proposes that such control mechanisms need to be in place due to the human nature, as people act in self-interested and rationally bounded manners while making decisions. And this behavior will have sub-optimal consequences for the firm (Eisenhardt 1989; Fama and Jensen, 1983; Young, 2009). In the past, several studies have investigated the effects of such corporate governance mechanisms. La Porte et al. (2002) have found that cash-flow ownership by shareholders will lead to a better firm valuation. Yermack's (1996), however, depicted a negative relationship between the size of a board and a firm's performance, and a study by Mehran (1995) revealed that different types of managerial compensation might lead to an increase in firm performance. Yet, less research has been performed on the impact of such corporate governance mechanisms on specifically the performance of M&A deals.

The debate on corporate governance commenced in the United States of America. With the implementation of the so called 'Sarbanes Oxley Act', certain standards had been created with regards to corporate governance. This concept of corporate governance exists of several components of which three will be studied in more detail in this research. The reason why specifically the number of large shareholders (also known as blockholders), the board of directors and CEO remuneration schemes have been chosen to investigate is based on the fact that according to literature these components play an important role as well as the fact that these components are relatively easy observable (e.g. Bhagat and Black, 2000; Bebchuck and Grinstein, 2005; Clarke, 2007). As these components should help to align the interests of the board of directors with that of the shareholders, one could expect that these components will

positively relate to the performance of M&A deals. This performance can be measured in multiple ways, however this study will use the cumulative abnormal returns on the shares of the acquiring firm surrounding an M&A deal announcement as an indicator of the performance of a specific deal (e.g. Lewellen, Loderer and Rosenfel 1985; Hayward and Hambrick, 1997). In an attempt to find support for this expectation the following research question has been formulated:

'How do the number of blockholders, the board of directors and CEO remuneration schemes relate to M&A deal performance?'

As mentioned before, over the last couple of decades not only the number of performed acquisitions has increased, but also the attention of both the academic as well as the business world on this topic (Barkema and Schijven, 2008). Despite this increased interest, research shows a failure rate for acquisitions ranging from 50% up to even exceeding 70% (e.g. Cartwright and Cooper, 1993; Marks and Mirvis, 2001). As a result, research is searching for ways to increase this performance and one of the solutions might be found in the concept of corporate governance. In order to study this impact, it is necessary to separate the concept in different components, and as explained before the components the number of blockholders, the board of directors and remuneration schemes are not only large and important components but also relatively easy to observe. Therefore, this study will investigate the impact of these three corporate governance components on the performance of an M&A deal, which will be measured based upon the cumulative abnormal return on the stock of a firm after an M&A deal announcement. Prior research has claimed this as a good measurement for M&A deal performance (e.g. Hayward and Hambrick, 1997; Andrade et al., 2001). In order to do so, a dataset has been gathered, including public listed firms in the United States, which have acquired at least 51% of the shares of another public listed firm in the same country in the past. Due to the lack of available data, the potential dataset only covers the time period 2007 – 2011. The reason why solely firms within the United States have been selected can be justified as most available data has been gathered in the United States. Also, prior research has shown that the performance of cross-border and domestic M&A deals might differ from one another (Danbolt, 2004). By performing this research, insight will be provided into the ways in which corporate governance mechanisms can be set up in order to increase the performance of M&A deals. This will not only add value from an academic perspective on how to increase the M&A performance, but it will also do so from a practical business perspective. The findings might be of importance for firms to increase their M&A deal performance, as research has shown a high failure rate of M&A deals.

The remainder of this study is organized as follows. Chapter two will provide a review of the literature on the agency theory, corporate governance and M&A performance. Next, in chapter three, the sample selection of this study will be presented including a description of the research methodology, which is being used, and the variables of interest. Chapter four will display the results based on the empirical analysis described in chapter three. A discussion and conclusion on the findings of this study will follow in chapter five next to the limitations of this study and potential topics for future research.

#### 2. Literature Review

This chapter will provide the theoretical basis for this study. First of all, the Agency Theory will be reviewed as this theory can be seen as the fundament for Corporate Governance. Next, a closer look will be taken on the concept of Corporate Governance. The origin of Corporate Governance within the United States will be explained as well as different types of Corporate Governance mechanisms.

# 2.1 M&A Deals

As claimed by Jensen (1986), firms need to maximize their value. One way to establish this is by firm growth. On the one hand this can be established by growing organically while on the other hand and in a more radical sense a firm can take over other firms, also known as acquisitions (Barkema and Schijven, 2008). Over the last couple of decades, the total number of performed acquisition deals has statistically increased (Barkema and Schijven, 2008). According to literature, there are different reasons for this type of growth strategy. One of the most well-known reasons for these acquisitions is gaining access to external resources (Hofmann and Schaper-Rinkel, 2001). Sometimes these resources cannot be built internally or within a specific timespan and a firm might therefore decide to acquire another firm, which already has these resources in place (Eisenhardt and Schoonhoven, 1996). But acquisitions are not only targeted at tangible assets only. Several studies, for instance, claim that M&A deals are being performed in order to gain access to specific knowledge and to transfer this knowledge to the acquirer's firm (Bresman, Birkinshaw and Nobel, 1999; Gupta and Roos, 2001). Next to the accessibility of resources, accessibility of new foreign markets can be another reason (Anand and Singh, 1997). Also, while performing an M&A deal, the acquiring firm aims at achieving synergies (Hayward and Hambrick, 1997). These achieved synergies create a combined value, which exceeds the value of both individual firms (Hayward and Hambrick, 1997).

Within the process of performing an acquisition, three important phases can be identified: due diligence, negotiation and integration (Picot, 2002; Zollo and Singh, 2004). The first phase of performing an M&A deal is the selection of the right target, in which performing proper due diligence is crucial. In their research, Marks and Mirvis (2001) claim that within this process of performing due diligence, attention needs to be addressed to two main fits: a strategic and a psychological fit. First of all, a firm needs to gain insight in the possibilities of creating synergies in case a firm is acquired. For instance, tests need to be performed with regards to a fit between both structures and cultures in order to judge if the target firm forms a good match (Marks and Mirvis, 2001). Secondly, from a psychological perspective, it is important to gain insight into the mindset of the workforce of a target firms in order to understand the challenges, which might occur while integrating the acquired firm (Marks and Mirvis, 2001). Next to these two broad categories, the due diligence will investigate on the financial situation and opportunities of the target firm. As claimed by Perry and Herd (2004), when lacking the performance of due diligence, it will be nearly impossible to realize expected value of a certain deal. When this phase of performing due diligence has ended and the target has been assessed as having potential, the phase of negotiating the deal will start. In this second phase, the acquisition agreement will be discussed, resulting in either an agreement followed by a transaction or in a breakdown followed by the termination of a bid or a hostile takeover (Gaughan, 2007). In case of an agreement, the last phase will become active: the integration. This phase can also be divided into two stages. Firstly, the planning of the integration, which already needed to start in the due diligence phase. Koch (2002) claims that during this stage, three actions need to be performed: developing a new vision, identifying opportunities and safeguarding the functionality of the firm during the integration phase. When the deal officially is closed, the planning stage will become reality, as the actual integration will start.

#### 2.1.1 M&A Deal Performance

The performance of an M&A deal can be measured in different ways. One way to look at this performance level is by focusing on the shareholder value, which is either created or destructed in times of the acquisition as a proxy for the performance of the M&A. In order to do so, a so-called 'event study' needs to be performed in which the abnormal stock market reaction surrounding the M&A announcement is being measured. This will provide data on

whether the market sees the M&A as either value creating or destructing, or as Hayward and Hambrick (1997) state: 'A positive abnormal return indicates that the security market has revised upward its expectations of future returns from the security; a negative return indicates that the market has lowered its expectations for the firm' (Hayward and Hambrick, 1997, pp. 112). Having a positive abnormal return would indicate a good M&A deal while negative abnormal returns indicate a bad M&A deal. The sign of the abnormal return from the stock market therefore can be seen as an indicator of M&A performance. Hayward and Hambrick (1997) focus on the impact of CEO self-overconfidence, also known as 'CEO hubris', on the premiums paid for acquisitions. The authors suggest that as a result of this overconfidence the price, which is being paid for a target firm is too high compared to its actual value. Having paid too much will lead to less value for the shareholders of the acquiring firm as value is lost and therefore the performance of such an M&A deal might end up being poor. A similar negative result is found by Andrade et al., (2001). In their study, the authors analyze the market reaction of an M&A deal announcement and find that the shareholder value will increase for the bidding firm however this particular value for the acquiring firm is negative. Moeller et al. (2005) also state that based on an analysis of the merger wave in the late 1990s M&A deals on average have a value destroying effect for the shareholders of the acquiring firm. Roll (1986) claims that an M&A deal simply can be seen as a way to redistribute the wealth of the acquiring firm to the shareholders in the target firm. Despite the fact that the previously discussed literature claims that M&A deals will have a neutral or even negative effect on the shareholder value of the acquiring firm, other research has suggested differently. First of all, Asquith et al. (1983) has shown that the average cumulative abnormal returns for shareholders of the acquiring firm are positive. In addition, the researchers stated that the results might have slightly been influenced. Later on, Jensen and Ruback (1993) provided an overview of event studies including the study of Asquith et al (1983) and based on this overview the authors claimed: '... corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose" (Jensen and Ruback, 1993, pp.55). Bruner (2002) as well concludes that on average M&A deals will create value for shareholders of a target firm and that there are no clear abnormal returns for the shareholders of the acquiring firm as a result of an M&A deal. Overall, one can state that the academic literature with regards to the value effect on acquiring-firm shareholders is rather inconclusive, although the more recent studies show a negative effect.

According to literature there are various explanations for such negative value effects.

One of the most well-known problems occurring within firms are the so-called 'agency-

problems'. Due to the separation of ownership and control, an agency-conflict might occur resulting in negative value effects for the acquiring firm as a result of an M&A deal. More on these problems will be discussed in the next paragraph. This section will discuss other motives such as self-confidence of managers, also known as managerial hubris. Roll (1986) concludes that directors may overestimate takeover gains due to their self-confidence, as they overestimate their managerial skills and potential to improve the acquired firms. As a result, these directors might end up paying too much money for a potential target. This premium is important because it reflects the amount of value directors anticipate to extract from the targeted firm and as a result shareholders will use this indication to assess the deal (Hayward and Hambrick, 1997). Next to that, a higher premium means that more profit needs to be gained out of the deal in order to cover the expenses (Hayward and Hambrick, 1997). Overall, they confirm the findings of Roll (1986), as they state that the managerial self-confidence indeed leads to higher acquisition premiums. Another explanation has been provided by Jensen (1986) who claims that due to the availability of excessive free cash flows, directors will be less critical on target firms compared to situations in which there are less free cash flows and therefore firms might end up acquiring targets with less potential. This is confirmed by Bebchuck and Grinstein (2005) who found that in case of excess cash, directors will prefer to invest this money into acquisitions rather than investing it in another project or even returning this money to the shareholders in dividends. In addition to this, Jensen (1986) claims that due to this free cash flow money, directors are less dependent on external capital markets, which might act as a control mechanism. Next to the available excessive cash flows, another explanation might lie in the overvaluation of a firm, meaning that a firm's stock is priced higher compared to its underlying value (Jensen, 2005). In order to constrain this overvaluation, directors might want to take action in order to justify the high stock price. One of the ways in which an attempt can be made to do so is via the performance of acquisitions as these acquisition deals might generate value. Jensen (2005), however, shows that most such acquisitions will end up failing in the long run.

This paragraph started off with analyzing the academic literature concerning M&A performance. As stated, there is no clear consensus in the literature with regards to either the value creation or destruction for the acquiring-firm shareholders. However, more recent studies have shown a negative impact. Next, this paragraph discussed potential explanations for this effect and concluded that some explanations might be found in self-overconfident directors, targets with limited potential which are being acquired due to the availability of free cash flow and overvalued equity. One of the mechanisms to overcome these problems is

having an active Corporate Governance policy. The next paragraph will discuss the underlying theory for this concept, the so-called 'Agency Theory'.

# 2.2 Agency Theory

One of the most well-known economic theories is the Agency Theory, based on the separation of 'ownership' and 'control' (Berle and Means, 1932; Jensen and Meckling, 1976). In firms with shareholders, the board of directors is being hired to represent them and to take charge of the firm. While doing so, these directors will receive 'residual control rights', meaning that they have the right to act with the funds of the shareholders in a way they think is best (Fama, 1980). The reason why they receive these rights are because directors are closer on the business. As the future is unknown, the shareholder cannot expect the director to make the best decisions all the time. Therefore shareholders bear the risk of losing their investment based on the decisions of the management of the firm, as it is impossible to set up a contract claiming a certain return on their investment. The Agency Theory is based upon the idea of self-interest utility maximization of both the principal as well as the agent (Alchian and Demsetz, 1972). While the shareholder wants to achieve as much firm value as possible, the directors on the other hand might for instance solely be interested in gaining money and power. This conflict of interest between a principle (shareholder) and an agent (directors) is so called 'agency conflict'. In the year 1776, Adam Smith already stated in his book 'The Wealth of Nations' that this conflict will occur when someone needs to make decisions based on the investments of someone else: 'The directors of such (joint-stock) companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private co-partnery frequently watch over their own.'

As the director has the advantage of information asymmetry, he or she might easily misuse this advantage in order to gain his or her personal interests (Akerlof, 1970; Williamson, 1993). Therefore the principal will be searching for ways to prevent the agent from maximizing his or her utility (Jensen, 1994). One of the ways to do so is 'monitoring', meaning that the principle measures the performance of the agent (Alchian and Demsetz, 1972; Fama and Jensen, 1983). By actively monitoring the shareholders can prevent the directors from acting in their self-interests (Alchian and Demsetz, 1972). The shareholders, however, need to be careful while monitoring the board of directors as too much monitoring might feel as a restriction. The costs, which are being made by the shareholders in order to keep an eye on the board of directors, are being called 'monitoring cost'. Next to monitoring

the board of directors another way to overcome the agency conflict is by aligning the interests of both parties. This can be achieved through an appropriate corporate governance structure of an organization (Sheifler and Vishny, 1997). As a result, corporate governance is seen as one of the most important ways to solve the agency conflict in practice. The literature uses several definitions of the concept, however two of the most common definitions of the concept are: 'The ways in which suppliers of finance to corporations assure themselves of getting a return on their investment' (Sheifler and Vishny, 1997, p. 739) and '... a set of mechanisms through which outside investors protect themselves against expropriation by the insiders' (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2002, p.1150). The next couple of paragraphs will discuss the concept of corporate governance more in-depth.

#### **2.3** Corporate Governance in the United States

As has been addressed in the introduction, this study will solely focus on M&A deals performed within the United States. One of the reasons why only deals from within the United States have been selected is the fact that next to the internal corporate governance components another aspect being of influence is the legislation with regards to this concept. Such legislation can be found in the corporate governance codes of countries, which in the United States is called the 'Sarbanes-Oxley Act' (Clarke, 2007; Young, 2009). As all of the selected deals are under the same legislation this factor is the same for all the deals and has therefore no impact. Due to the fact that it still is an important factor this paragraph will take a closer look to the corporate governance code of the United States, in other words the Sarbanes-Oxley Act. Right after the great depression and the Wall Street crash in the 30's, the first debates with regards to the concept of corporate governance started out in the United States (Clarke, 2007). In accordance to these debates, also the first legislation concerning the corporate governance had been designed during this period in time. The main goal of this legislation was to protect investors as well as trading in general from directors who solely acted in their own interests as addressed in the previous paragraph (Young, 2009). After this period it became more quite with regards to the topic because its interest was retrieved as a result of various corporate scandals in the '80s and '90s (Leuz, 2007). Also during this time period the US market was booming as a result of technological developments such as the Internet (Clarke, 2007). Based on these developments new firms were established and new markets created. Consequently to the dot.com sector as well as to the rising number of Initial Public Offerings (IPOs), becoming a shareholder grew of interest. However, as the environment changed, it became harder for investors to keep monitoring the board of directors of a firm as instead of being on the actual trading floor, people could now just invest while sitting at home (Leuz, 2007). Whilst these happenings and as a result of all of the new technology the stock prices kept increasing. Nevertheless, this stopped in the beginning of the 21th century as the stock market crashed and the dot.com bubble bursted. At the same time, speculations on abnormal profits resulted in investigations on the way in which some businesses had been performed. Corporate fraud on a large scale was detected. Two of the most well-known scandals in that particular period of time were Enron and Worldcom who had been misleading their investors on fraudulent matters. In response to these scandals, drastic measures needed to be taken by the US Congress. Next to the installation of the Public Company Accounting Oversights Board (CEOB), the US Congress decided to approve the passage of the so-called Sarbanes-Oxley Act, named after the authors of it Congressman Michael G. Oxley and Senator Paul Sarbanes. With this act, a regime of internal control mechanisms, which needed to be applied on US based public firms, was being installed. As the board of directors of firms like Enron and Worldcom had engaged in staggering financial misdemeanors without being detected, the society was asking the government for a necessary restraint and therefore the Act needed to be installed relatively fast (Clarke, 2007; Collins, Masli, Reitenga & Sanchez, 2009). The implementation of this act in the year 2002 was not only important for US based firms but also for firms in other countries as the governments of these other countries were following the implementation of the act with great interest. Later in time, different countries started designing their own corporate governance code with the Sarbanes-Oxley Act as their reference (Clarke, 2007; Young, 2009). With the installation of the act, the US Congress wanted to provide better protection for investors by improving the accuracy and transparency of the reporting standards of firms (Peij et al., 2002).

Overall, the Sarbanes-Oxley Act provides investors with more protection as it enhances the visibility of the activities taken within firms as it for instance enforces an increase in disclosure as well as in auditor independence (Clarke, 2007; Young, 2009). In that way, the shareholders can more easily monitor the board of directors of the firm and the level of fraud is being reduced due to this transparency. Also the board of directors could be held reliable for their deeds, making the directors more accountable for potential mismanagement (Collins et al., 2009). The interest of the shareholders and directors are therefore more in line, preventing potential 'agency conflicts'.

#### 2.4 Corporate Governance Mechanisms

The concept of corporate governance is rather broad. Within this concept a distinction can be made between internal and external corporate governance mechanisms (Denis and McConnell, 2003). The external control mechanisms, for instance, are the legislation as described in last paragraph as well as the so-called 'market for corporate control' (Fama, 1980). This market for corporate control serves as a last resort and should only operate in case the internal control mechanisms have failed their task (Fama, 1980). The idea of this mechanism originates out of the work of Manne (1965) after which it has been refined several times (e.g. Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983). According to this mechanism, the performance of a firm will decrease as directors act in their self-interest. As a result, the stock price of the firm will drop and alternative management teams will offer themselves to the shareholders as a replacement of the current board of the firm. Next, a competition will be set up in which the different management teams compete for the rights to manage the firm. This competition is also known as the 'market for corporate control'. When internal corporate governance mechanisms fail in their task, this external mechanism will automatically start and act on behalf of the shareholders. Although both, the legislation and the market for corporate control are important, this study will solely focus on the internal corporate governance mechanisms. According to literature, such internal mechanisms have been designed in order to align the interests of directors with those of the shareholders (Walsh & Seward, 1990). More particularly, this study will focus on three of these mechanisms: CEO remuneration, the number of blockholders and the board of directors. The reason why these components have been selected is based upon the fact that these components play a relatively large part in the corporate governance policy of a firm as well as upon the fact that these mechanisms are relatively easy to observe (Clarke, 2007; Young, 2009). Each of the following three paragraphs will discuss and review one of these mechanisms in order to formulate the hypotheses, which will be tested in this study.

#### **2.4.1 CEO Remuneration Schemes**

The first corporate governance component to be studied is CEO remuneration. Being the highest ranked person within a firm, one might expect that the CEO will have a lot of power on the strategic decision making process within a firm and with that, a strong influence on performing M&A deals. This also has been shown by the fact that CEO overconfidence will lead to bad M&A performance, as discussed previously. As a result, it is essential for a firm to set up a proper remuneration scheme in which the personal wealth of the CEO is connected to

that of the firm. This way potential agency problems can be overcome and good M&A deal performance be stimulated. In the next couple of paragraphs, general research on remuneration schemes will be addressed. All of this research will eventually result in the formulation of hypotheses with regards to the topic of CEO remuneration.

According to research, incentive schemes are one of the most often used mechanisms to align the interest of the board of directors of a firm and its shareholders (Shleifer and Vishny, 1997). Or as Mehran (1995, pp.165) claims: '... tying a managers' compensation to firm performance motivates them to make more value-maximizing decisions'. Over the last couple of decades, the remuneration of top managers has heavily increased (Bebchuck and Grinstein, 2005). Bebchuck and Grinstein (2005), for instance, show that over the period 1993-2003 the average CEO pay has more than doubled. In general, one can state that directors are rewarded with three types of compensation: a regular base salary, a bonus and long-term incentive schemes (LTIS) (Lewellen, Loderer and Rosenfel, 1985; Tehranian, Travlos and Waegelein, 1987; Sanders, 2001; Williams and Rao, 2006). Not only the amount of payment of the board of directors of large firms has increased, also the way in which they are rewarded (Bebchuck and Grinstein, 2005). More and more CEOs are being rewarded by using equity based compensation, also known as the long-term incentive schemes (Bebchuck and Grinstein, 2005).

First of all, a CEO will receive a base salary consisting of a fixed amount of cash in return for the provided labor. The amount of cash is set and therefore not based on the performance of an individual. In result one can state that this type of compensation is relatively risk-free, as it will be paid out regardless of the result of a person's work (Berger et al., 2007). Murphy (1999) has shown that only 21% up to 40% of large firm CEOs' compensation consist of this type of remuneration. Next to the base salary, CEOs often receive a bonus, which most of the times is being provided annually. These bonuses will be connected to pre-defined targets. In practice, however, these targets often are being set too low or too high (Murphy, 1999). As these bonuses are relatively short-term focused in order to gain on M&A deal performance a firm should largely reward his or her CEO with the last type of compensation, the long-term incentive schemes. This is because these schemes consist of stocks and stock options and are therefore connected to the stock price of a firm. As a result, the personal wealth of a CEO will be connected to the performance of the firm and connected to that to the performance of the M&A (Jensen and Murphy, 1990;Bodolica and Spraggon, 2009). This is confirmed by research claiming that providing directors with a substantial fraction of the ownership of a firm will lead to an increase in overall firm performance (Denis and McConnel, 2003; Hall and Murphy, 2003). The emphasis of this research will therefore also lie on this last type of compensation.

In case CEOs are being paid with stock, they receive a number of shares of the firm. When the firm performs well, the stock price will go up and as a result, the CEO will gain more money. Therefore in case a CEO is compensated based on stock, he or she will act in a way, which will stimulate M&A deal performance as this will as well increase his or her personal wealth. Stock options on the other hand can be separated in either 'call options' or 'put options'. A call option can be seen as '...the right to buy a share of stock at a prespecified exercise price for a pre-specified term' (Hall and Murphy, 2002, pp. 3). A director will benefit of such options in case the stock price on the market is higher as compared to the exercise price (Bodie, Kane and Marcus, 2008). On the other hand, put options can be seen as the right to sell stock for a pre-specified price within a specific range of time (Bodie et al., 2008). As stated before, by connecting the CEOs personal wealth with the performance of a firm, one might expect that this form of 'equity based compensation' will lead to better M&A deal performance. Or as stated by Jensen and Murphy (1990, pp.1): 'It is not about how much you pay, but how you pay'.

In the past, various types of research have been performed on the influence of equity-based compensation. Lewellen et al. (1985) were one of the firsts investigating the relationship between director stock ownership and the performance of M&A deals in which they conclude that stock ownership compensation is positively related to abnormal stock returns for bidding firms. According to the authors, this is the result by the alignment of interests (Lewellen et al., 1985). These results are confirmed in later research performance done by Theranian et al. (1987). These latter claim more generally that long-term incentive schemes are positively related to positive abnormal returns of an M&A deal announcement. Also Datta and Raman (2001) show a significant positive relation between equity-based compensation of the board of directors of a firm and the market price of the stocks of an acquiring firm.

Next to research on the influence of stock ownership on the performance levels of firms, research by Ueng (1998) has focused on the behavior of management as a result of this type of compensation. As a result, Ueng (1998) shows that stock ownership will lead to good behavior of the board of directors, meaning behavior, which is in line with the interests of the shareholders (Ueng, 1998). While most of the studies have been measuring stock ownership as the yearly managerial compensation component, Swanstrom (2006) uses another definition by measuring the cumulative total ownership of stock, which a CEO has of his or her firm.

By using this method, even more significant positive results were shown with regards to the impact of equity-based compensation schemes. Swanstrom (2006), for instance, found an adjusted R-squared of 10.9% and F-statistics of 12.96%, while respectively Datta and Raman (2001) showed only an adjusted R-squared of 1.25% and F-Statistics of 2.45% using their definition of stock ownership as the yearly compensation of a CEO being paid in stock.

However, not all of the studies with regards to equity-based compensation are positive or in line with the previously discussed studies. While studying the same effect, Bliss and Rosen (2001) show that within the banking industry, the higher the equity-based compensation, the less likely the directors will perform an M&A deal – which is contrary with the findings of Khorana and Zenner (1998) who performed a cross-industry study. Bliss and Rosen (2001) claim that within the banking industry the board of directors will be more careful with performing M&A deals as they have concerns with regards to negative stock price reactions as the past has shown that a lot of M&A deals end up failing in that particular industry. Also Smith and Kim (1994) as well as Walker (2000) indicated that most M&A deals within the banking industry do not reach their initial goals. This difference in results might therefore be explained by the type of industry in which a firm is active; especially as the positive results found by Khorana and Zenner (1998) as well as Datta and Raman (2001) using cross-industry data. Another explanation for this negative result is provided by Bodolica and Spraggon (2009) who claim that the negative result found by Bliss and Rosen (2001) could be linked to stock ownership and not stop option ownership indicating a difference between both types of rewards. This is interesting as most of the studies that measure equitybased compensation combine stock ownership and stock option ownership while these different types of compensation might also have different effects (Murphy, 1999; Sanders, 2001). For instance, while being rewarded with stock options will relatively trigger someone to perform more M&A deals as compared to when being rewarded by just stock (Sanders, 2001). This is due to the fact that stock options generate fewer reductions in the CEO's personal wealth in case the stock price declines (Sanders, 2001). The value of these stock options will increase dependent on the stock-price volatility while the directors have the option to either buy the shares or not while in case of being rewarded with stock the directors set with the shares and chose (Black and Scholes, 1973; are cannot Merton, 1973; Jensen and Meckling, 1976). Therefore in case of compensation by stock options, a director might have a higher incentive to pursue riskier investments. Wright, Kroll, Lado and Van Ness (2002) confirm this risk-enhancing impact of stock options on the M&A strategy of a firm. A second difference between stock ownership and stock options is the fact that in case of stock ownership the director will not only profit from an increase in stock price, but also by the dividends which are being paid over the shares, while this will not be the case when it comes to stock options as there will be no dividend payment (Murphy, 1999).

With regards to the influence of stock options on M&A, several studies have been conducted and reveal a positive effect. Smith and Swan (2008), for instance, have found that in case the CEO of a firm was compensated with stock options, the chance that the firm would engage in M&A deals would increase. Next to that, Williams, Michael and Rao (2008) have found a positive relation between stock option compensation and M&A decision-making. The interest in stock options not only increased as an effect of the positive impact of the type of compensation, but also due to tax advantages (Murphy, 1999).

Overall this paragraph has analyzed the literature with regards to the incentive schemes of the board of directors and the CEO. A first interesting finding is that the effects of such incentive schemes also depend on the industry in which a firm operates, as for instance the banking industry has shown negative effects while cross-industry research has shown the opposite. As will be shown later on in this research, this industry effect will be taken into account in this study as well. Next, general research has pointed out that long-term incentive contracts will lead to positive M&A performance. Datta and Ramen (2001), for instance, have confirmed that having long-term incentive schemes will reduce the mistakes leading up to M&A deal failure as shown before. Directors who are rewarded based upon long-term incentive schemes pay significantly lower premiums for an acquisition and next to that these firms acquire targets, which have more growth potential (Datta and Ramen, 2001).

As this paragraph has shown, most of the studies measure equity-based compensation as the sum of stock ownership and stock option rewards. Research however also indicates that both forms separately might have different effects. As the study of Swanstrom (2006) has indicated it also might be interesting to study the total ownership instead of yearly compensation of a CEO. As a result, one might expect a general positive relationship of CEO stock ownership as well as CEO stock option ownership on the performance of an M&A deal. Next to that a general positive relation is expected of the total equity-based compensation of a CEO on the performance of an M&A deal. Concluding from the literature addressed in this paragraph as well as from the general thought that remuneration can be used in order to align the interests of CEO and shareholders, the following hypotheses can be formulated:

Hypothesis 1a: CEO stock ownership will positively relate to the performance of an M&A deal.

Hypothesis 1b: CEO stock option ownership will positively relate to the performance of an M&A deal.

Hypothesis 1c: A high level of CEO equity-based compensation will positively relate to the performance of an M&A deal as compared to a low level of CEO equity-based compensation.

#### 2.4.2 The Number of Blockholders

The second corporate governance component investigated by this study is the number of large shareholders, also known as 'blockholders'. These blockholders, and more particularly institutional blockholders, have become a significant phenomenon of increasing importance over the last couple of decades. According to prior literature, blockholders can be defined as shareholders who at least own 5% of the shares of a firm (Bhagat and Black, 2000; Holderness, 2003). Due to the size of these shareholders, one might expect them to have influence on the decision-making process within a firm. Studies by Demsetz (1983) as well as by Shleifer and Vishny (1986) have tried to explain this impact by providing the so-called 'active monitoring hypothesis'. This hypothesis argues that the existence of blockholders will lead to more extensive and better monitoring of a firm's management. The reason for this lies in the fact that these large shareholders have invested a rather large part of their wealth into the firm and therefore these shareholders will more extensively monitor how their investment is being used.

Later in time, similar types of research confirmed this hypothesis while extending the body of research on the influence of large shareholders. For instance, studies performed by Agrawal and Mandelker (1990) as well as by Gillian and Starks (2000) state that the monitoring standards also have been increased due to the increasing level of professional fund managers as blockholders. Demsetz and Lehn (1985) argue that next to a reduction in bad decision-making, the existence of blockholders simultaneously will reduce the costs associated with these bad decisions. Another research by Bertrand and Mullainathan (2001) shows that blockholders play a large role in the process of designing the remuneration schemes for the board of directors of the firm (Bertrand and Mullainathan, 2001). This might be the result by the fact that the remuneration of the board of directors needs to be approved by the General Meeting of Shareholders and firms want to be sure to have the support of the largest shareholders before presenting the remuneration proposal to the rest of the shareholders. Although most of the blockholders will be external parties, research has shown that also internal blockholders significantly reduce managerial failures (Chen and Yur-Austin, 2007). Chen et al. (2004; 2007) also show that there is a positive influence of the existence of

blockholders on the general firm performance. All of these addressed studies show in some form that blockholders will positively relate to the performance of a firm.

Other research has focused on the influence of having blockholders in a targeted firm. Shleifer and Vishny (1986), for instance, show that in case a targeted firm has blockholders, there will be a positive impact on the occurrence of acquisitions. One of the reasons provided by the authors for this effect is that the existence of these blockholders will make it easier for a firm to be acquired as prior research has shown that the an acquisition will increase the shareholder value for the shareholders of a targeted firm. Next to that, research has shown that the acquisition premiums, which need to be paid, are lower in case a targeted firm had blockholders (Shleifer and Vishny, 1986). A similar result is supported by Shivdasani (1993) who found that in case the targeted firm has blockholders, which are unaffiliated to the management of the firm, the chance of an acquisition would increase.

To conclude, literature has found a positive impact of the number of blockholders and general firm performance. In line with the Agency Theory one however also might expect that a similar influence will be found on M&A performance. Based on this reasoning the following hypothesis has been formulated:

Hypothesis 2: A high number of blockholders within an acquiring firm will positively relate to the performance of an M&A deal as compared to having none shareholders.

#### 2.4.3 The Board of Directors

The third and last corporate governance component investigated in this study is the board of directors. This, due to the fact that this board will decide how to formulate the strategy of a firm as well as how to execute this strategy, including M&A deals. As Clarke (2007) explains, a director according to the US law is seen as a fiduciary agent who is designated to hold assets in trust or to exercise authority on behalf of someone else resulting in two main legal duties: 'care and loyalty' (Clarke, 2007, pp. 36). The first duty of care is connected to the way in which the firm is managed. The firm should be managed by making informed and reasonable decisions next to proper supervision of the business (Clarke, 2007). The second duty of loyalty is concerned with acting in good faith and not solely based on own interests (Clarke, 2007; Bagley, 2002). In the United States, there is a so-called unitary or 'one-tier' board structure. In general, boards in the United States exist of executive directors and non-executive directors. There might be a separation between the position of chairman of the board and the CEO, while typically the roles of chairman and CEO are combined (Clarke, 2007). The task of the non-executive directors most of the times will occur behind closed

doors and is therefore almost always invisible except for fellow board members. Although their work is invisible, the non-executive directors play an important part as the independence of these directors can be seen as one of the most important proxies for board effectiveness (McNulty, Roberts and Stiles, 2003). In a follow-up research, McNulty, Roberts and Stiles (2005) claim that the non-executive directors should possess three capabilities; these directors should be 'engaged but non-executive', 'challenging but supportive' and 'independent but involved' (Clarke, 2007, pp.55). So the non-executive directors should be on the one hand supporting the executive directors in their process of managing the business but on the other hand also critical and judgmental as they as well monitor the non-executive directors.

One of the focus areas of this study is board vigilance, which can be seen as the proportion of internal and external directors within a board. However, there is little consensus and even contradiction in the literature with regards to this topic. Several studies have shown that there is no positive influence of the number of directors on various performance measures of firms (for e.g. Mehran, 1995; Klein, 1998; Bhagat and Black, 1999). Kang and Shivdasani (1995) have studied the impact of the presence of external directors as well as the sensitivity of CEO turnover on the performance of Japanese firms. Their findings show that there is no positive effect of the number of external directors on the performance of a firm. Hermalin and Weisbach (2003) more recently have studied the impact of independent boards, defined as boards that have more external than internal directors, on the performance of a firm. Their results show that having more external directors will not per se increase a firm's performance, however the authors do claim that external directors enhance the decision-making process (Hermalin and Weisbach, 2003). For instance, the authors claim that the decision-making process with regards to topics such as takeover activities, the hiring and firing of employees or remuneration schemes are better facilitated (Hermalin and Wiesbach, 2003). There are however also some studies claiming a more positive impact. Kaplan and Minton (1994), for instance, show that on average, the external directors will stabilize as well as modestly improve firm performance. Similar effects have been found by Hossain, Prevost and Rao (2001) who point out a positive effect of the fraction of external directors on the performance of a firm.

Next to firm performance, the academic literature also has studied the influence of having external directors on other firm aspects. Berger, Ofek and Yermack (1997) for instance study the effect of board composition, measured by the percentage of external directors on board, on firm leverage. The authors find that external directors positively impact firm leverage, causing them to adopt capital structures, which allow more leverage (Berger et al.,

1997, pp.1422). In a different research, Weisbach (1988) studied the impact of this same board composition on the decision to remove top managers from the firm. In his research, Weisbach (1988) identifies external, internal and so called 'grey' directors and claims that a firm is so called 'outside-dominated' in case at least 60% of the directors is external. The findings of this study show that these 'outside-dominated' boards will more quickly remove bad performing CEOs while looking at the past performance of the CEO. Reasons for this can be find by the fact that external directors do not need to fear for their selves and they also want to the firm to perform well as their reputation is also connected to this. Therefore one might say that within 'outside-dominated' boards, the CEO will be removed more quickly when performing M&A deals which are value destroying. Also studies performed by Suchard, Singh and Barr (2001) as well as by Renneborg (2000) show similar results with regards to the positive impact of the presence of external directors on the turnover of top managers within firms.

As there is no clear consensus regarding the impact of having external directors, this study will built the hypotheses based on the agency theory. One could state that the more external independent directors a board has, the more independent a board is from the CEO. Due to the fact that a more independent board is less biased, one could expect that such a board is more likely to remove a CEO in case of bad performance. This, for instance, might be the case when there is a so-called 'managerial hubris'. As Hayward and Hambrick (1997) show in their research that there is a relationship between managerial hubris and the premiums paid for acquisitions, in case directors are self-overconfident. Next to that, the authors claim that the relationship between this hubris and the premiums paid for acquisitions might even be stronger in case the board vigilance is lacking (Hayward and Hambrick, 1997). Therefore the following hypothesis can be formulated:

Hypothesis 3a: A high level of board independence will positively relate to M&A deal performance as compared to a low level of board independence.

A second indicator of board vigilance used in this study is the consolidation of the positions CEO and the Chairman of the board. This means that the same individual holds the position of Chairman and CEO. Brickley, Coles and Jarrell (1997) have been studying the effect of having different individuals on both positions and found that there is no significant effect. One could however expect that in case there is one individual holding both positions, there is no objective sight on the performance, which might result in overpaying the premiums for an acquisition. And on the other hand in case two different individuals hold both positions, one

could expect that there is more supervision on the premiums paid for an acquisition, which might result in better M&A deal performance. Testing how this CEO and Chairman duplicity relates to M&A deal performance would especially be interesting as has been shown that the CEO plays an important role within M&A decision making as CEO hubris for instance can be seen as one of the explanations why M&A deals end up failing. Based on the findings of Hayward and Hambrick (1997) stating the more vigilant a board is, the less managerial hubris and therefore the lower the chance that the premiums for an acquisition will be overpaid, the following hypothesis can be formulated:

Hypothesis 3b: In case one person holds the position of both CEO as well as Chairman this will negatively relate to M&A deal performance.

Thirdly and lastly, a logarithm of the number of directors of a firm will be tested in order to study the way in which the size of a board relates to M&A deal performance. Prior studies have used a logarithm of the number of directors in order to indicated the board effectiveness (Yermack, 1996; Berger et al., 1997). These studies have indicated that small boards are more effective (Yermack, 1996; Berger at al., 1997). It will for instance take longer for large firms to decide as more people will try to out-argue one another. As a result it also will be harder to reach consensus in such large boards. Therefore one might expect that the size of a board inversely will be related to the performance of an M&A deal. As a consequence, the following hypothesis has been formulated:

Hypothesis 3c: The number of directors in a board will negatively relate to M&A deal performance.

# 3. Research Methodology

The following chapter will present the data sample which has been used in this study as well as the variables which have been tested and the overall research methodology.

### 3.1 Sample and Approach

The key unit of analysis of this study is M&A deal performance, measured by the cumulative abnormal returns on the shares of the acquiring firm surrounding an M&A deal announcement. The data used in this study has been retrieved from the 'Thomson One Banker' (TOB) database. By various selection criteria, a dataset has been gathered which makes it possible to generate these cumulative abnormal returns surrounding M&A deal announcements. The selection criteria were as follows:

- 1. The announcement date of the M&A deal needed to lie between 01/01/2007 and 12/31/2011. The reason for this specific timespan is chosen due to the fact that data on corporate governance mechanisms of other datasets solely has been available for this limited timespan.
- 2. Only completed deals are included. Although a lot of firms announce a deal, only a part of the announced deals are actually completed due to various reasons. Therefore in order to measure the real announcement return only completed deals are taken into account.
- 3. Both, the acquirer as well as the target firm must be located in the United States. This will assure that all the firms need to comply with the same external legal restrictions provided by the previously discussed Sarbanes-Oxley Act. Next to that, research has shown that the performance of cross border and domestic deal might differ from each other (Danbolt, 2004). In order to assure the measurement of the corporate governance mechanisms as clearly as possible only domestic deals will be taken into account.
- 4. Both, the acquirer as well as the target firm must be publicly listed. This, due to the fact that most available corporate governance data is based on public information which only the publicly listed firms are obliged to comply and share this information.
- 5. The percentage of shares which is owned by the acquiring firm after the transaction took place needs to be at least 51%. This, in order to assure that solely real takeover deals are taken into account in which the acquiring firm obtains the majority of the shares and voting rights.
- 6. Research has claimed that corporate governance mechanisms as well as firm characteristics are very specifically different for firms in the financial- and utility industry compared to any other industry (Berger, Ofek and Yermack, 1997). Therefore, these specific industries are left out of the data sample by excluding M&A deals performed by or on firms with the Standard Industrial Classification (SIC code) 6000 6999 and 4900 4999.

While starting off with 482.600 M&A deals, due to these restrictions the final M&A deal selection resulted in a total dataset of 462 unique M&A deals. Table I provides an overview of the results of applying the selection criteria on the data sample.

*Table I – Selection of M&A deals based of Thomson One Banker database* 

| Selection step:  | Resulting # deals |
|--|-------------------|
| Select Acquirer without SIC code 6000 – 6999 and 4900 - 4999 | 482600            |
| Select Targets without SIC code 6000 – 6999 and 4900 - 4999  | 455446            |
| Acquirer Nation (USA)  | 162624            |
| Target Nation (USA)  | 136520            |
| Acquirer Public Status (Public)                              | 81350             |
| Target Public Status (Public)                                | 21809             |
| Date Announced (01/01/2007 – 12/31/2011                      | 3375              |
| Percent of Shares Owned (>51%>)                              | 3375              |
| Deal Attitude (Friendly, Neutral, Hostile)                   | 585               |
| Deal Status (Completed)                                      | 462               |

While the dependent variable could be retrieved based on data of the Thomson One Banker database, other databases were needed in order to retrieve the independent- and control variable of this study. Data with regards to the total number of stock and stock options as well as their value has been collected from the 'Compustat' database. The data with regards to executive compensation such as the percentage of equity-based pay of the CEO is gathered from the 'ExecuCOMP' database while via the database 'RiskMetrics' the data with regards to director- as well as governance issues was collected. Finally data with regards to blockholders has been collected based on the 'Thomson Reuters Institutional' database. All of these datasets have been merged by the variables 'year' and 'CUSIP6'. This last variable indicates a company unique code which could be used to identify specific deals in combination with the date of the deal. While merging the different datasets, data had been dropped as some datasets did not have data available on specific firms. As a result, a complete data sample of 148 M&A deal observations was left. The analyses of this study have been performed using the program STATA12.

#### 3.2 Variables

The following paragraphs will discuss the variables which have been used in the analyses of this study. First of all the main dependent variable will be discussed, followed by respectively the independent- and control variables.

### 3.2.1 Dependent Variable 'M&A deal Performance'

As stated before, the main dependent variable of this study is 'M&A deal Performance', measured by the cumulative abnormal returns on the shares of the acquiring firm surrounding an M&A deal announcement. As claimed by prior research, this cumulative abnormal return will be a good indicator for the performance of a specific M&A deal (Hayward and

Hambrick, 1997). This, as the market will judge these deals as they will react upon the announcement of a M&A deal yet to come. In case this market reaction is positive, the deal can be defined as being 'good' while M&A deals which are negatively judged by the market can be seen as being 'bad' (Jensen, 2001). In order to generate the main dependent variable of this study, a so called 'event study' method has been applied to the data sample which as previously addressed has been retrieved from the Thomson One Banker database (Asquith et al., 1983; Hayward and Hambrick, 1997; Adrade et al., 2001).

As said before, the event studies measure the reaction of the market based on a specific event, in this case an M&A deal announcement. The method has been invented by Fama et al. (1969) after which it has been redefined by Brown and Warner (1980, 1985) and broadly used in various types of research (Agrawal et al., 1992). The reason why this study focusses on the announcement date of the M&A deal and not the effective date, lies on the fact that the announcement date will capture the reaction of the market more accurately accordingly to the semi-strong form of the Efficient Market Hypothesis (EMH) (Fama, 1980; Bodie, Kane and Marcus, 2009). The Efficient Market Hypothesis has three forms, a weak form of information efficiency, a semi-strong form of information efficiency and a strong form of information efficiency (Fama, 1980). In the weak form, the hypothesis claims that all past publicly available information is already transferred into the stock price of a firm, in the semi-strong form not only the past publicly information will be transferred into the stock price but next to that this price will instantly change to reflect new public information like an M&A deal announcement and lastly in the strong form all of the information is immediately being transferred into the stock price, also hidden 'insider information'. One therefore could state that the event studies typically emanate from the semi-strong form.

The first step in performing an event study is setting up the estimation window, on which the expected average return can be calculated. Based on the natural relation of the stock with the market, a benchmark is being created in order to compare the market reaction around an M&A deal announcement with the normal expected market return. This study will, in line with prior research, use 300 trading days as the estimation window (Hayward and Hambrick, 1997). The data with regards to the stock prices which is needed to measure the expected average return is based on the CRSP equally weighted Index. The first step of calculation these expected average returns can be calculated by using the following formula:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}$$

With:

 $E(R_{i,t})$  = the expected regular return on security *i* at time *t* 

 $\alpha_i$  = the security's average return in a period with zero market return

 $\beta_i R_{m,t}$  = the co-movement with the market

 $\varepsilon_{i,t}$  = error term of firm *i* (assumed to be zero)

The next step in the process of constructing the dependent variable is choosing a specific 'event window'. This event window can be defined as the range of days prior and past a specific event, in which the abnormal return should be measured. In the selection two aspects need to be taken into account. On the one hand the level in which one can believe in the Efficient Market Hypothesis and on the other hand whether or not M&A deals can already be predicted by the market before the official announcement takes, for instance via gossip. Next to that, the range decides whether multiple factors can be of influence or not as the chance of other aspects influencing the impact of the M&A deal announcement will be larger within a broader event window as compared to a small one. This study will in line with prior research apply an event window of thirty days prior and thirty days past the M&A deal announcement as the window in which abnormal returns need to be measured (e.g. Liodakis and Brar, 2004). The reason why the window already starts before the announcement took place is based on the fact that I believe that there will be some gossiping and predictive power upfront an M&A deal announcement especially as there is research providing evidence for this (e.g. Andrade and Stafford, 2004; Campa and Hernando, 2004; Malkiel, 2005; Brar, Giamouridis & Liodakis, 2009). Next to that the hypotheses will be tested more clearly as the reactions of the market shown in short-term windows often also are the consequence of emotional reactions instead of well reflected choices. By providing the specifications, the program Eventus was able to calculate all the abnormal return within the event window:

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

Now that the abnormal returns have been calculated it is time for the last step in the process of creating the dependent variable, generating the cumulative abnormal returns. Research has shown that the cumulative abnormal returns will provide a better overview of the market reaction as compared to single abnormal returns due to the fact that the reactions might fluctuate between one day and another within the chosen event window (Bodie et al, 2009).

The cumulative abnormal returns have been generated by summing up the individual abnormal returns of each day in the event window:

$$CAR_{i,t1,t2} = \Sigma(t1,t2) AR_{i,t}$$

With:

 $CAR_{i,t_1,t_2}$  = the cumulative abnormal return of firm *I* at time *t1* till *t2* 

t1 = the start day of the time window

t2 = the closing day of the time window

All of these steps are taken in order to create the dependent variable of this study, the cumulative abnormal returns on the shares of the acquiring firm surrounding an M&A deal announcement.

### 3.2.2 Independent Variable 1: Percentage of CEO Stock ownership

The first subject investigated is the influence of CEO remuneration which will be tested based upon three different independent variables. The first variable which will be tested is the percentage of CEO Stock ownership. As addressed in the literature review, one way of aligning the interest of directors and shareholders is by aligning the personal wealth of a director with the goals of the shareholders. In case a CEO owns shares within the firm, this will be the case and therefore one might expect that the CEO will perform accordingly and tries to gain the most value as possible out of an M&A deal. Therefore this study will investigate how CEO stock ownership will relate to M&A deal performance. In order to generate this variable, data has been gathered from both the Compustat as well as the ExecuCompustat database. As a result, the variable has been generated by dividing the total numbers of shares owned by the CEO with the total number of outstanding shares of a firm and multiplying this by hundred in order to retrieve a percentage.

### 3.2.3 Independent Variable 2: Percentage CEO Stock Option Ownership

Next to the 'Percentage of CEO stock ownership', a second independent variable has been created in a similar way in order to measure the influence of the percentage of CEO stock option ownership. Also for this variable data has been gathered from the Compustat and ExecuComp databases and as a result the variable has been generated by dividing the total stock options owned by the CEO and dividing this by the total outstanding number of outstanding stock options of a firm and multiplying this by hundred in order to retrieve the percentage. As the literature review has shown several studies show a positive impact of CEO

stock option ownership. As a result, one might expect to find similar results with regards to the impact on the cumulative abnormal returns of an M&A deal.

### 3.2.4 Independent Variable 3: Percentage of equity-based CEO compensation

The last and third variable with regards to the remuneration of the CEO is the percentage of equity based CEO compensation. While the last two variables represent the stock and stock options which a CEO owns, this variable on the other hand measures the total stock and stock options which a CEO receives in compensation as a measure compared to the total compensation of a CEO. In line with the previous two variables, according to Agency Theory, one might expect that this type of compensation will align the interests of the CEO and shareholders and in result will lead to good M&A deal performance. In order to measure the effectiveness of the ratio equity based compensation, a categorical variable has been generated based on data originated from the ExecuComp database. The variable has four categories:

Table II: overview of the categorical variable 'Percentage of equity-based CEO compensation'

### Categorical variable: percentage equity-based compensation

| Category 1 | Less than 20% equity based compensation       |
|------------|---|
| Category 2 | Between 21% and 50% equity based compensation |
| Category 3 | Between 51% and 75% equity based compensation |
| Category 4 | More than 75% equity based compensation       |

# 3.2.2 Independent Variable 4: The Number of Blockholders

The second corporate governance component which is being studied in this research is the number of blockholders. The literature describes blockholders as an entity which owns at least 5% of the shares of a firm (Bhagat and Black, 2000; Holderness, 2003). This study will uphold the same definition. Based on the data retrieved from the Thomson Reuters database, the number of blockholders for a particular firm at the moment of the acquisition announcement could be retrieved. In order to measure the influence of the number of blockholders, a categorical variable has been generated indicating the number of blockholders in order to test how this number relates to M&A deal performance. The categorical variable has three categories:

Table III: overview of the categorical variable 'The number of Blockholders'

### Categorical variable: the number of Blockholders

| Category 0 | No blockholders        |
|------------|------------------------|
| Category 1 | 1 up to 3 blockholders |
| Category 2 | 4 or more blockholders |

### 3.2.5 Independent Variable 4: Position of CEO/Chairman

A last corporate governance component investigated is the board of directors which will be tested based on three different variables. This first variable with regards to this subject is the consolidation of the positions: CEO and Chairman of the board. Based on data retrieved from the RiskMetrics database and in line with the research performed by Hayward and Hambrick (1997), this study will construct a dummy variable which has the value of '1' if the position of CEO and Chairman of the board have been occupied by the same individual at the time of the M&A deal announcement and the value of '0' if this is not the case. As shown in the literature, the premiums paid for M&A deals are connected with consolidated CEO and Chairman positions, and therefore one might expect that this might have a negative impact on the M&A deal performance.

### 3.2.6 Independent Variable 5: Log Number of directors

The second independent variable with regards to the subject of the board of directors indicates the number of directors within a firm's board at the moment of the M&A deal announcement. This variable has been generated in line with prior studies such as Yermack (1996) as well as Berger et al. (1997) in the utilization of the logarithm of the number of directors. The data used to generate this variable has been retrieved from the RiskMetrics database on Director information. As stated in the literature review, smaller boards seem to be more effective in monitoring the board of directors which might lead to better firm performance. Therefore one also might expect a similar impact on the performance of an M&A deal.

### 3.2.7 Independent Variable 5: Board Independence Ratio

The last independent variable with regards to the board of directors is a categorical variable on the independence of a board. Also this variable has been constructed based on data from the RiskMetrics database. The generation of this variable is the result of dividing the number of independent directors by the overall number of directors of a board. Prior studies have shown to use similar methods for board independence identification (Yermack, 1996; Berger

et al., 1997), however the findings with regards to this board independence are rather ambiguous. The variable has four categories:

Table IV overview of the categorical variable 'Board Independence'

### Categorical variable: Board Independence

| Category 1 | Between 51% and 60% independent directors in the board |
|------------|--|
| Category 2 | Between 61% and 70% independent directors in the board |
| Category 3 | Between 71% and 80% independent directors in the board |
| Category 4 | More than 80% independent directors in the board       |

### 3.2.8 Control Variable 1: Dummy variable Cash-payment

The first control variable used in this study is the method of payment. The premiums of acquisition deals can be financed via different methods such as all-cash bids or, a combination of cash and stock or all-stock bids (for e.g. Andrade et al., 2001; Hayward and Hambrick, 1997). Andrade et al. (2001) as well as Moeller and Schlingemann (2004), show that all-cash bid acquisitions generate higher bidder returns compared to all-stock acquisitions. More specifically, Loughran and Vijh (1997) have shown that on the short term, acquiring firms using stock financing have abnormal returns of -24.2% whereas the abnormal return of allcash acquisitions lies on 18.5%, showing the influence of the method of payment. Next to a short term window, also research have been performed on the influence of the payment method on the longer term. For instance both Mitchell and Stafford (2000) as well as Sudarsanam and Mahate (2003) show that M&A's fully financed with stock significantly show more negative long-term returns, compared to all-cash bids. Therefore and in line with these studies, a distinction is being made between either an all-cash bid or an alternative form of financing. Based on the data of the Thomson One Banker, a dummy variable has been created with the value of '1' in case the acquisition premium is being financed by cash-only, while the variable has the value '0' in case alternative financing methods have been used.

### 3.2.9 Control Variable 2: Dummy variable Existence of Competing-bidders

The second control variable used in this study is the number of competing bidders. As prior research has shown, having more bidders will increase the premium which needs to be paid for an M&A deal (Hayward and Hambrick, 1997; Kusewitt, 1985). The higher premium might influence the abnormal return and therefore there needs to be controlled for the number of bidders. Based on the data of the Thomson One Banker database, a dummy variable has

been generated with the value of '1' in case there were multiple bidders and a value of '0' if there were none competing bidders.

# 3.2.10 Control Variable 3: Dummy variable Relatedness of firms

Next to the cash payment and existence of competing bidders, a third control variable has been added with regards to the relatedness of both firms. According to literature, acquisitions in which both firms are market/product or technology related, will perform better compared to acquisitions of unrelated firms (Kusewitt 1985; Singh and Montgomery, 1987; Shelton, 1988; Morck et al., 1990; Krishnan, Miller and Judge, 1997; Moeller et al., 2005). In result, there should be controlled for this relatedness which has been done by including a dummy variable which indicated whether both firms are in the same industry. Based on the Thomson One Banker database, the so called 'industry SIC codes' have been gathered and based on this data, a dummy variable has been generate with the value '1' in case both firms share the same SIC code and the value of '0' if this is not the case. In result, this variable will show whether both firms are related with one another or not.

# 3.2.11 Control variable 4: Industry Trends

As firms operate in different industries one might expect that the specific industry can be of influence on the returns on a specific deal. As seen before, this study already takes this into account as M&A deals which took place in the financial- and utility industry have been deleted out of the data sample due to the fact that research has shown that firms within these specific industries act differently compared to others. Based on the data of the Thomson One Banker database, dummy variables have been generated for all the different industries such as transport, construction and service. The variables have a value of '1' in case the acquirer is active in that particular industry and the value of '0' when this was not the case.

#### 3.2.12 Control Variable 4: Past Firm Performance

The fourth control variable is the past performance of the firm. There needs to be controlled for this variable as this past performance is expected to positively influence the cumulative abnormal returns surrounding the announcement date (Morck et. al., 1990). There are several ways in which this performance can be measured. This study will use the Return On Assets (ROA) as an indicator of this past performance, measured by dividing the Net Income of the firm with its Total Book Value of Assets. The data used in order to generate this variable is retrieved from the Compustat database.

#### 3.2.13 Control Variable 5: Year effects

The last control variable in place controls for the years taken into account in the sample size, also known as 'year effects'. These dummies have been taken into account in order to check whether or not the regression is affected by time fixed effects (Thomson, Pedersen and Kvist, 2006). In order to do so, the dummies have a value of '1' in case the M&A deal took place in a certain year and a value of '0' if this was not the case.

#### 4. Results

The following chapter will present the main findings of this research. Different ordinary least squares (OLS) models have been provided in order to measure the impact of the different corporate governance mechanisms on the Cumulative Abnormal Returns (CAR) of an M&A deal of the acquiring-firm.

## **4.1 Descriptive Statistics**

As explained in the previous chapter, this study has been using 'event studies' in order to generate the dependent variable of this study, the cumulative abnormal returns on the stock price of a firm surrounding an M&A deal announcement. Although the main event window of this study has been set at thirty days prior and past the M&A deal announcement, also some other short-term windows have been tested in order to check for differences which briefly will be discussed in paragraph 5.1. As addressed before, this study will test a relatively long term event window, already starting before the actual event took place. One of those reasons for this is the fact that in theory stock market might seem very efficient, but in practice there will be some imperfections with as a result potential predictive power as well as the fact that it will take some time before the information on the deal has settled in (Malkiel, 2003). Therefore by studying a relatively long term event window, one is able to see the market reactions from a better perspective (Hayward and Hambricks, 1997). Some descriptive statistics on the dependent variable of this study have been provided in Table V.

Table V - Descriptive Statistics of the Cumulative Abnormal Returns to acquiring firm shareholders

| Acquirer CARs, based on an estimation window of 300 trading days |        |           |        |       |     |
|--|--------|-----------|--------|-------|-----|
| Event window   | Mean   | Std. Dev. | Min    | Max   | N   |
| -30 to 30  | 0.004% | 16.2415   | -70.7% | 66.2% | 148 |

Descriptive statistics of the Cumulative Abnormal Returns over an estimation window of 300 trading days for an event window of -30 days and +30 days surrounding the M&A deal announcement, based on the market model. The sample consists of 148 domestic M&A deals within the USA which took place during the period 2007 until 2011.

As Table V shows, the average cumulative abnormal return of the M&A deals in the data sample is positive. This however is not in line with prior research which shows that most of the M&A deals would negative influence the shareholder value of an acquiring firm (e.g. Servaes, 1991; Duggal and Millar, 1999). Next to that, one can notice a relatively large 'Minimum' and 'Maximum', meaning that the reaction of the market in some deals are rather extreme. Figure I provides an overview of the cumulative abnormal returns for the selected window per calendar year. As the figure shows, most of the calendar years show a negative cumulative abnormal return. The above addressed positive cumulative abnormal return therefore is explained by the fact that although most of the years claim negative cumulative abnormal returns, this return will be stronger in case of a positive return as compared to a negative return. Especially in the year 2010 the market on average has responded positively on M&A deal announcements. Considering these findings one can state that it is important to control for year effects.

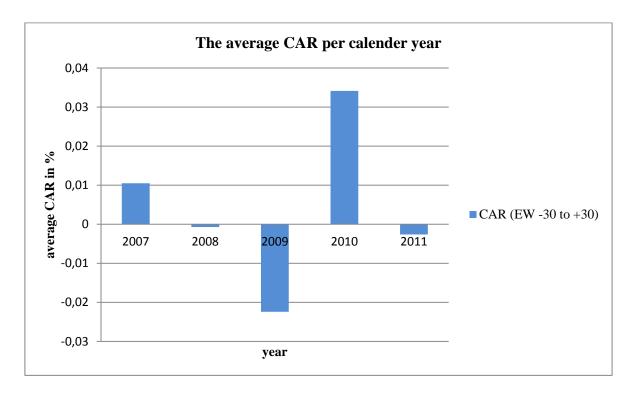


Figure I - Average Cumulative Abnormal Returns of the M&A deals per calendar year

The figure illustrates the average cumulative abnormal return to acquiring-firm shareholders in an event window ranging from 30 days prior and past an M&A deal announcement.

The descriptive statistics of the independent variables are provided in Table VI. All the variables have been defined after which their mean, standard deviation, minimum value and maximum value have been reported. While looking at CEO stock option ownership as well as CEO stock ownership one can conclude that the average CEO owns 11.28% of the stock

options of a firm and 0.66% of its shares. This large difference is logical based on the fact that a firm has far less options as compared to shares. While looking at the remuneration package of the CEO, one could state that most of the of the CEO compensation packages consist of a part equity based pay which lies between 21% and 74%. As addressed in the literature review, research has shown that by binding the remuneration of the CEO with the performance of the firm, the performance of the firm will most likely increase (Denis and McConnel, 2003; Hall and Murphy, 2003). With regards to the second corporate governance mechanism, the number of blockholders, one can state that in the data sample firms on average have around two blockholders. This would mean that on average firms have two parties which own more than 5% of the shares and therefore have relatively much influence on a firm (Chen, Hartford and Li, 2004). These blockholders will improve the monitoring on the board which according to literature might lead to improved firm performance (Demsetz and Lehn, 1985). Lastly the influence of the board of directors is also tested in three different variables. The first variable shows that in 68% of the investigated firms, the CEO of the firm also has the position of Chairman of the board. As prior literature has shown, if this is the case, there will be less monitoring and the CEO will have more room to follow his or her own plan (Clarke, 2007). While looking at the number of directors, one could conclude that the logarithm has an average value of 2.24. Lastly a categorical variable is provided to study the impact of different independence level categories. The average of this category is 1.54 meaning that on average the board of a firm has an board independence level varying between 51% and 70%.

Table VI - Descriptive Statistics of the independent variables

# Independent variables, based on an estimation window of 300 trading days

| Variable                               | Definition   | Mean   | Std. Dev. | Min | Max    | N   |
|--|--|--------|-----------|-----|--------|-----|
| % CEO Stock<br>Options<br>Compensation | Percentage options owned by the CEO  | 11.28% | 12.49     | 0   | 76.80% | 148 |
| % CEO Stock<br>Compensation            | Percentage shares owned by the CEO   | 0.66%  | 1.84      | 0   | 13.93% | 148 |
| Category CEO<br>Stock<br>Ownership     | Categorical variable, percentage equity based composition of total compensation package CEO Value $1 = <20\%$ Value $2 =$ between 21% and 50% Value $3 =$ between 51% and 74% Value $4 = > 75\%$ | 2.59   | 0.78      | 1   | 4      | 148 |
| Category<br>Number of                  | Categorical variable, number of blockholders in acquiring firm Value $0 = 0$ blockholders  | 1.19   | 0.73      | 0   | 2      | 148 |

| Blockholders                                      | Value 1 = 1,2 or 3 blockholders<br>Value 2 = 4 or more blockholders  |      |      |      |      |     |
|---|--|------|------|------|------|-----|
| Dummy<br>CEO=Chairman                             | Dummy variable, in case the CEO also has the position of Chairman Value 0 = not the case Value 1 = CEO is also Chairman  | 0.68 | 0.47 | 0    | 1    | 148 |
| Log # Directors                                   | Log of the number of directors in a firm   | 2,24 | 0,25 | 1,61 | 2,77 | 148 |
| Categoty<br>Percentage<br>Manager<br>Independence | Categorical variable, percentage of independent directors compared to total number of directors of board Value 1 = between 51% and 60% Value 2 = between 61% and 70% Value 3 = between 71% and 80% Value 4 = > 80% | 1.54 | .85  | 1    | 4    | 148 |

This table provides an overview of the descriptive statistics of the independent variables used in this study.

The descriptive statistics of the control variables are being displayed in Table VII. Most of the control variables are dummy variables. The first control variable is a dummy variable with regards to the payment method of an acquisition. This variable has the value of '1' in case an acquisition is completely paid with cash and a value of '0' if this is not the case. Based on the data, one could state that 65% of the analyzed acquisition deals have been solely paid by cash. Research has shown that all-cash bid acquisitions generate higher bidder returns compared to all-stock acquisitions (Andrade et al., 2001; Schlingenmann, 2004). The second dummy variable used in this study is the industry relatedness between the acquiring firm and its target. The results show that on average, 35% of the M&A deals took place within the same industry. With regards to this industry relatedness the literature claims that acquisitions which are being performed on firms which are similar will perform better compared to acquisitions on unrelated firms (Kusewitt 1985; Singh and Montgomery, 1987; Shelton, 1988; Morck et al., 1990; Krishnan, Miller and Judge, 1997; Moeller et al., 2005). This might indicate that acquiring a firm in a related industry will increase the M&A deal performance. Thirdly, a dummy variable has been generated for the number of bidders. The data has shown that only in 4% of the cases there were multiple bidders before the acquisition took place. According to literature, having multiple bidders will decrease the M&A deal performance as most often this would lead to a higher acquisition premium as both firms will bid on the target firm (Hayward and Hambrick, 1997; Kusewitt, 1985). As last paragraph has shown, it is important to control for year effects. Therefore dummies have been generated for each of the years taken into account in this research. The descriptive statistics show that the years are more or less equally distributed over the five years as the mean of each dummy variable has a value around 0.20. Another factor controlled for is the industry of the acquiring firm. As addressed before, M&A

deal performance might differ as a result of industry differences. Table VII shows that most of the acquisitions in the sample have been performed in the 'food and beverages industry', 'home appliances industry' and 'services industry'. Lastly the descriptive statistics show that on average the past performance of the firms in which the M&A deals took place was positive. There however was a rather broad variance between this past performance as the Return on Assets ranges between minus 54% and 34%.

Table VII - Descriptive Statistics of the control variables

# Control variables, based on an estimation window of 300 trading days

| Variable                   | Definition   |      | Std.<br>Dev. | Min | Max | N   |
|----------------------------|--|------|--------------|-----|-----|-----|
| Dummy 100% Cash<br>Payment | Dummy variable, in case the deal was completely paid with cash (no stocks etc.)                        | 0.65 | 0.48         | 0   | 1   | 148 |
| Dummy Same<br>Industry     | Dummy variable, in case both firms are in the same industry  | 0.35 | 0.48         | 0   | 1   | 148 |
| Dummy >1 Bidder            | Dummy variable, in case there was more than one bidder   | 0.04 | 0.19         | 0   | 1   | 148 |
| Year 2007                  | Dummy variable, in case the deal took place in the year 2007   | 0.20 | 0.40         | 0   | 1   | 148 |
| Year 2008                  | Dummy variable, in case the deal took place in the year 2008   | 0.21 | 0.41         | 0   | 1   | 148 |
| Year 2009                  | Dummy variable, in case the deal took place in the year 2009   | 0.18 | 0.39         | 0   | 1   | 148 |
| Year 2010                  | Dummy variable, in case the deal took place in the year 2010   | 0.26 | 0.44         | 0   | 1   | 148 |
| Year 2011                  | Dummy variable, in case the deal took place in the year 2011   | 0.17 | 0.38         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT1 | Dummy variable, in case the studied M&A deal took place within the metals and mining industry          | 0.02 | 0.14         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT2 | Dummy variable, in case the studied M&A deal took place within the food and beverages industry         | 0.23 | 0.42         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT3 | Dummy variable, in case the studied M&A deal took place within the home appliances industry            | 0.43 | 0.50         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT4 | Dummy variable, in case the studied M&A deal took place within the manufacturing                       | 0.09 | 0.29         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT5 | Dummy variable, in case the studied M&A deal took place within the wholesale and retail store industry | 0.01 | 0.11         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT7 | Dummy variable, in case the studied M&A deal took place within the services industry                   | 0.17 | 0.38         | 0   | 1   | 148 |
| Dummy Acquirer<br>SIC CAT8 | Dummy variable, in case the studied M&A deal took place within the consulting service industry         | 0.04 | 0.20         | 0   | 1   | 148 |

|       | Measure for the firm's performance measured by |       | 10.65 | _     | 2.40/ | 148 |
|-------|--|-------|-------|-------|-------|-----|
| (ROA) | dividing the Net Income with the Total Book    | 4.73% | 10.65 | 54%   | 34%   | 148 |
|       | Value of Assets                                |       |       | 34 /0 |       |     |

This table provides an overview of the descriptive statistics of the independent variables used in this study.

### 4.2. Regression Models

In Table VIII an overview is provided of the performed OLS regression models which have been analyzed in order to test the previously formulated hypotheses. Five different models have been provided, a model of the control variable (Model 1), a model on the CEO remuneration schemes (Model 2), a model on the number of blockholders (Model 3), a model on board of directors (Model 4) and lastly an overall model in which all of the variables have been taken into account (Model 5). As a result, the tested hypotheses will be based on two models, either Models 2, 3 or 4 as well as Model 5. The next paragraph will discuss the individual corporate governance components in more detail. As addressed before, the models which have been tested are based on an event window ranging from thirty days prior up to thirty days past an M&A deal announcement and the estimation period on which the average expected returns have been calculated has been set at 300 trading days.

Table VIII

Descriptive Statistics of the control variables

Event window 4 (-30 until +30)

|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|--|---------|---------|---------|---------|---------|
| Constant                               | .0306   | 0186    | 0137    | .0349   | 1497    |
|  | (.0012) | (.0630) | (.0681) | (.1355) | (.1431) |
| % CEO Stock Options Ownership          |         | .0019*  |         |         | .0021*  |
|  |         | (.0011) |         |         | (.0012) |
| % CEO Stock Ownership                  |         | .0035   |         |         | .0020   |
|  |         | (.0057) |         |         | (.0063) |
| Category CEO Equity-Based Compensation |         |         |         |         |         |
| Category 1 (<20%)                      |         |         |         |         |         |
| Category 2 (between 21% and 50%)       |         | 0537    |         |         | 0568    |
| 3070)                                  |         | (.0471) |         |         | (.0458) |
| Category 3 (between 51% and 70%)       |         | 0224    |         |         | 0609    |
| ,                                      |         | (.0455) |         |         | (.0454) |
| Category 4 (>71%)                      |         | 1582    |         |         | 3276*   |
|  |         | (.0971) |         |         | (.1139) |
| Categories on Blockholders             |         |         |         |         |         |
| Category 0 (0 Blockholders)            |         |         |         |         |         |
| Category 1 (1 - 3 Blockholders)        |         |         | .04126  |         | .0486   |

| Category 2 (4+ Blockholders)                                   |         |         | (.0407)<br>.0251 |         | (.0380)<br>.0197 |
|--|---------|---------|------------------|---------|------------------|
| Category 2 (11 Brockmorders)                                   |         |         | (.0437)          |         | (.0411)          |
| Dummy CEO=Chairman   |         |         | (.0137)          | 0331    | 0221             |
| Dummiy ede emarman   |         |         |                  | (.0363) | (.0389)          |
| Log # Directors  |         |         |                  | .0207   | .0594            |
| 208 211000015  |         |         |                  | (.0695) | (.0642)          |
| Categories Board Independence Category 1 (Between 51% and 60%) |         |         |                  | (0000)  | (,               |
| Category 2 (Between 61% and 70%)                               |         |         |                  | .0645*  | .0830**          |
|  |         |         |                  | (.0333) | (.0384)          |
| Category 3 (Between 71% and 80%)                               |         |         |                  | 0318    | .0732            |
|  |         |         |                  | (.0535) | (.0474)          |
| Category 4 (>80%)  |         |         |                  | .0195   | .2889            |
|  |         |         |                  | (.1432) | (.1760)          |
| Dummy 100% Cash Payment  | .0053   | .0177   | .0064            | .0047   | .0138            |
|  | (.0307) | (.0289) | (.0312)          | (.0274) | (.0279)          |
| Dummy Same Industry  | 0152    | 0169    | 0161             | 0291    | 0177             |
|  | (.0321) | (.0321) | (.0330)          | (.0295) | (.0306)          |
| Dummy >1 Bidder  | 1683*** | 1297**  | 1740***          | 1468**  | 1013*            |
|  | (.0577) | (.0584) | (.0594)          | (.0616) | (.0606)          |
| Year 2007  | 0125    | 0099    | 0061             | 0012    | .0162            |
|  | (.0420) | (.0467) | (.0429)          | (.0445) | (.0510)          |
| Year 2008  | 0079    | .0095   | 0056             | .0018   | .0136            |
|  | (.0472) | (.0445) | (.04830)         | (.0467) | (.0454)          |
| Year 2009  | 0213    | 0029    | 0136             | .0004   | .0285            |
|  | (.0431) | (.0466) | (.0470)          | (.0404) | (.0450)          |
| Year 2010  | .0137   | .0131   | .0153            | .0243   | .0242            |
|  | (.0333) | (.0348) | (.0343)          | (.0340) | (.0371)          |
| Dummy Acquirer SIC CAT1  | 0774    | .0245   | 0666             | 0883    | .0258            |
|  | (.0766) | (.0927) | (.0752)          | (.0932) | (.1149)          |
| Dummy Acquirer SIC CAT2  | .0121   | .0578   | .0286            | 0316    | .0285            |
|  | (.0516) | (.0682) | (.0555)          | (.0621) | (.0744)          |
| Dummy Acquirer SIC CAT3  | 0294    | .0152   | 0188             | 0704    | 0165             |
|  | (.0349) | (.0491) | (.0383)          | (.0475) | (.0581)          |
| Dummy Acquirer SIC CAT4  | 0352    | .0598   | 0266             | 0877    | .0199            |
|  | (.0578) | (.0773) | (.0553)          | (.0713) | (.0844)          |
| Dummy Acquirer SIC CAT5  | .1359   | .1298   | .1470            | .1023   | .0770            |
|  | (.1330) | (.1519) | (.1396)          | (.1463) | (.1514)          |
| Dummy Acquirer SIC CAT7  | 0141    | .0219   | 0015             | 0663    | 0169             |
|  | (.0624) | (.0667) | (.0645)          | (.0632) | (.0691)          |
| Dummy Acquirer SIC CAT8  | .0651   | .0882   | .0760            | .0427   | .0761            |
|  | (.0489) | (.0563) | (.0517)          | (.0582) | (.0655)          |
| Firm Performance (ROA)   | .0006   | .0013   | .0008            | .0005   | .0018            |
|  | (.0012) | (.0013) | (.0013)          | (.0014) | (.0012)          |
|  |         |         |                  |         |                  |

R-squared 0.0851 0.1525 0.0922 0.1171 0.2300

Robust standard errors in brackets; significance levels \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

This table reports both, parsimonious OLS regression models as well as a combined OLS regression model. The dependent variable is the Cumulative Abnormal Returns to an acquiring firm in the timespan of thirty days prior to thirty days past the M&A deal announcement. The sample consists of 148 domestic M&A deals of listed US based firms.

#### **4.3 CEO Remuneration Schemes**

Model 2 as well as Model 5 in Table VIII provide the results on CEO remuneration. Three variables have been tested: the percentage of total stock owned by the CEO, the percentage of total options owned by the CEO and lastly the percentage of equity based remuneration in the total remuneration package of the CEO.

First of all, the impact of option ownership of the CEO will be analyzed. One might expect to find a positive influence of stoch option ownership on the cumulative abnormal results as in result of this ownership, the personal wealth of the CEO will be connected to the performance of the firms. Therefore a CEO will try to prevent bad M&A deal performance and stimulate good M&A deal performance. The results provided in Table VIII show both in Model 2 as well as in Model 5 a significant positive relationship between stock option ownership and M&A deal performance. According to Model 2, the impact will 0.0019, meaning that a 1% increase in CEO stock option ownership will lead to a 0.19% increase in the cumulative abnormal returns for bidding-firm shareholder. In addition, Model 5 shows even an effect of 0.21%. In conclusion, the result shows that a 1% increase in stock option ownership of an CEO will lead to an increase in the cumulative abnormal return on shareholder value of the acquiring firm between 0.19% and 0.21%. Based on this analysis, one therefore can conclude that a high level of CEO stock option ownership will positively relate to M&A deal performance.

Although one would expect to find a similar result with regards to CEO stock ownership, the results of the analyses show insignificant results and as a result, no conclusions can be drawn with any certainty. The sign of the coefficient of this variable in both models however is positive and therefore in line with the expectations. This, due to the fact that prior research has shown that stock ownership would increase general firm performance (Jensen and Murphy, 1990; Yermack, 1996). To conclude, although the sign of the coefficient of this variable is in line with the expectations, the results are insignificant and as a result no clear conclusions can be drawn with certainty on the way CEO stock ownership relates to the cumulative abnormal returns of the shares of the acquiring firm surrounding an M&A deal announcement and therefore on M&A deal performance.

The third and last variable which has been measured in order to test the hypotheses is

the percentage of equity based compensation of a CEO. This variable consists of four categories ranging from less than 20% equity-based compensation up to more than 75% equity-based compensation. The base category in the analyses consists of the lowest category. The result of the highest category in Model 5 shows a negative significant effect and in result one can conclude that rewarding a CEO with more than 75% equity based pay would negatively relate to the cumulative abnormal returns on the shares of an acquiring firm with 32.8% as compared to having less than 20% equity based compensation. Although not significant, the coefficients of the other categories are all negative. Both, the significant negative result as well as the negative signs of the coefficients of the other categories are not in line with the expectations. As the result on category 4 in Model 5 shows a significant negative result, one can conclude that rewarding a CEO with a high level of equity-based compensation will negatively relate to the performance of an M&A deal as compared to a low level of CEO equity-based compensation.

Based on the literature review, three hypotheses have been formulated. The first hypothesis has regards to CEO stock option ownership:

Hypothesis 1a: CEO stock option compensation will positively relate to the performance of an M&A deal.

Based on the results shown in Table VIII one can state that a high level of CEO stock option ownership will positively relate to M&A deal performance. Therefore Hypothesis 1a has been confirmed. The second hypothesis which has been formulated has regards to CEO stock ownership:

Hypothesis 1b: CEO stock compensation will positively relate to the performance of an M&A deal.

The results of the analyses do not show any significant result with regards to CEO stock ownership. All of the signs of the coefficients however are positive and therefore in line with the expectations. Based on the fact that there are no significant results, one cannot draw clear conclusions on the performed analyses and therefore one can state that no support has been found for hypothesis 1b. The third and last hypothesis which has been formulated with regards to CEO remuneration has regards to the percentage of equity-based CEO compensation:

Hypothesis 1c: A high level of CEO equity-based compensation will positively relate to the performance of an M&A deal as compared to a low level of CEO equity-based compensation.

All of the signs of the coefficients in both, Model 4 as well as Model 5 are not in line with the expectations as these signs are negative. The results of the highest category of equity-based compensation is significantly negative. Therefore one can state that a high level of CEO equity-based compensation will negatively relate to the performance of an M&A deal as compared to a low level of CEO equity-based compensation. The results show an opposite relation as compared to the formulated hypothesis and therefore one can claim that hypothesis 1c can be rejected.

#### 4.3 The Number of Blockholders

The second corporate governance component which has been studied is the number of large shareholders of a firm, also known as blockholders. As prior specified, a blockholder is a shareholder owning at least 5% of the shares of a firm (Bhagat and Black, 2000; Holderness, 2003). According to literature, blockholders will lead to additional monitoring as these shareholders would 'protect' their investments resulting in better firm performance (Pound, 1988; Bethel and Liebeskind, 1993). Therefore one would expect that the existence and number of blockholders would lead to better M&A deal performance. One however need to take into account that there might be potential a 'free-rider' problem if there are multiple blockholders. This, due to the fact that in such a situation the blockholders might think that other blockholders will cover their part of active monitoring (Bhagat and Black, 2000).

The results of this categorical variable have been provided in the Models 3 and 5. As explained before, the categorical variable has three categories. Category 0 is the base category indicating firms which do not have any blockholders. Category 1 indicates firms which have between 1 and 3 blockholders and Category 2 indicates firms which have 4 or more blockholders. The results show a positive sign for the coefficients of category 1 and 2 which is in line with the expectations. As these results however are not significant, no clear conclusions can be drawn. Based on the literature review, the following hypothesis had been formulated:

Hypothesis 2: A high number of blockholders within an acquiring firm will positively relate to the performance of an M&A deal as compared to having none shareholders.

One can state that no support has been found for hypothesis 2 as due to a lack of significance no clear conclusions can be drawn.

#### **4.4 The Board of Directors**

The third and final corporate governance mechanism which will be investigated is the board of directors. This mechanism has been measured based upon three different variables: a dummy variable explaining duplicity of the CEO and Chairman position, the logarithm of the total number of directors on a board and lastly a categorical variable on the percentage level of board independence. Models 4 and 5 of Table VIII provide the results on this corporate governance component.

As addressed in the literature review, one might expect to find a negative impact of CEO and Chairman duplicity. This, due to the fact that there will be less monitoring in case both positions are held by the same individual (Hayward and Hambrick, 1997). Both, Model 4 and 5 of Table VIII show a positive sign for the coefficient of this variable. This would be in line with the expectation. These results however are not significant and based on this insignificance, no conclusions can be drawn on how CEO and Chairman duplicity would relate to M&A deal performance.

The second hypothesis with regards to the board of directors is connected to the number of directors. In line with prior research, a logarithm of the number of directors has been used to generate this variable (Yermack, 1996; Berger at al., 1997). Jensen (1993) has shown that smaller boards are more effective and therefore this might as well relate to M&A deal performance. The results show that the coefficient of the variable in both models shows a positive sign which is not in line with the expectations. However, due to the fact that also these results are not significant, no clear conclusions can be drawn based upon the results.

The last variable which has been used for this specific corporate governance component is a categorical variable in which categories have been based upon the percentage of board independence. Research by Weisback (1988) as well as Berger et al. (1997) have indicated a positive impact of board independence on the leverage of a firm as well as the ease in which bad performing CEOs are being laid off. Having more independent directors would lead to more monitoring and as a result an increase in performance. The base category which has been used in this study is the smallest percentage group ranging from 51% up to 60%. Both, in Model 4 as well as 5, category 2 is significantly positive. Model 4 shows a coefficient of 0.065 while Model 5 shows a coefficient with a value of 0.083. Category 2 indicates that a firm has a board independence level ranging from 61% up to 70%. Based on the results one could conclude that having a board independence level of 61% up to 70% would positively relate to cumulative abnormal returns on the shares of an acquiring firm with 6.5% up to 8.3% as compared to having a board independence level of 51% up to 60%.

Therefore one could state that having a higher level of board independence would lead to better M&A deal performance. Except for category 3 of Model 4, all the other coefficients of the categories show a positive sign which is in line with the expectations. Due to a lack of significance one however cannot draw any conclusions with any certainty.

Based on the literature review, three hypotheses have been formulated. The first hypothesis formulated has regards to the level of board independence:

Hypothesis 3a: A high level of board independence will positively relate to M&A deal performance as compared to a low level of board independence.

As shown, only significant positive results have been found for category 2, ranging from 61% up to 70% of independence as compared to category 1, ranging from 51% up to 60%. Therefore no clear conclusions can be drawn based upon the highest category 4 indicating an independence level of more than 80%. So although this research could not find significant results for the higher categories 2 and 3, the study did indicate that it would be better for M&A deal performance to have a board independence level between 61% and 70% as compared for an independence level of 51% up to 60%. Therefore although not found in an extreme form, still the results show that a higher level of board independence would positively relate to M&A deal performance as compared to a low level of board independence. This can be explained by the fact that as a result of having more independent directors, more questions will be asked with regards to decisions and as the directors are independent they do not have to fear for potential personal consequences which all will resulting in more elaborate reviewing and therefore better results (Hayward and Hambrick, 1997). Next to that the independent directors will strive for the best results as their own image is on the line (Weisbach, 1988). Overall, one can conclude that hypothesis 3a is accepted. The second hypothesis which has been formulated has regards to CEO and Chairman duplicity:

Hypothesis 3b: In case one person holds the position of both CEO as well as Chairman this will negatively relate to M&A deal performance.

As has been addressed, there are no significant results found on this topic. As a result, one cannot draw any clear conclusions on the performed analyses testing whether CEO and Chairman duplicity would relate to M&A deal performance. Therefore one can state that no support has been found for hypothesis 3b. The third and last hypothesis which has been formulated with regards to the board of directors is on the number of directors:

Hypothesis 3c: The number of directors in a board will negatively related to M&A deal performance.

Also with regards to the logarithm of the number of directors no significant results have been found. Although the sign of the coefficients in both Model 4 and 5 are in line with the expectations, no clear conclusions can be drawn based upon the analysis. One therefore cannot claim with any certainty how the number of directors of a board would relate to M&A deal performance. To conclude, no support has been found for hypothesis 3c.

#### 4.5 Control Variables

The control variables in this study mainly aim to control for the effect of other aspects which might be of influence on the cumulative abnormal return of an M&A deal announcement and therefore influencing the M&A deal performance. What stands out is the fact that all models find a significant negative effect of the presence of competing bidders. An explanation for this can be found in the fact that the price of an acquisition will increase as a result of bidding wars between multiple parties. As a result, the market will negatively assess the acquisition price and with that the M&A deal performance will decrease (Hayward and Hambrick, 1997; Kusewitt, 1985). All other control variables however did not show any significant results. As a result, no conclusions can be drawn based upon these findings but also due to the fact that these variables are the control variable of the analyses. One however might state that in general most of the signs of the variables are in line with the expectations. For instance all of the models show positive results with regards to cash-payment, which is in line with prior research claiming that all-cash deals perform better as compared to deals which are finalized with alternative forms of payment (Kusewitt; 1985). A notable deviation however has regards to the industry relatedness. One would expect an M&A deal to perform better if it takes place within the same industry as there for instance already is extensive knowledge on this industry and its processes (Shelton, 1988; Morck et al., 1990; Krishnan, Miller and Judge, 1997; Moeller et al., 2005). The results of all models however show a negative coefficient for this tested dummy variable which therefore is not in line with the expectations. However as addressed before the results are not significant.

#### 5. Conclusion

This study started off by explaining that according to literature, most M&A deals do not increase or even decrease the shareholder value of an acquiring firm (e.g. Andrade et al., 2001; Moeller et al., 2005). As a result, literature has tried to find explanations and solutions

for this problem. One of those solutions might be found in the corporate governance structure of firms. As a result, this study has tried to investigate the corporate governance mechanisms: CEO remuneration schemes, the number of blockholders, and the board of directors. Now that the results are clear, the main research question of the study can be answered:

'How do the number of blockholders, the board of directors and CEO remuneration schemes relate to M&A deal performance?'

First of all, regarding CEO remuneration schemes, this study has found that some schemes do relate to M&A deal performance while others do not. According to the analyses, CEO stock option ownership will positively relate to M&A deal performance. Although expected, there was no evidence shown for a similar relationship with regards to CEO stock ownership as well as CEO equity-based compensation. While one might have expected to find similar results on all of the three variables, apparently the one component is more important than the other. Secondly, no evidence has been found on how blockholders relate to M&A deal performance. According to literature, blockholders would expand the level of monitoring and therefore one could have expected to find a positive relationship between the number of blockholders and M&A deal performance. However as addressed before, no significant results have been found for such a relationship and therefore no conclusions can be drawn. Regarding the board of directors, in terms of the percentage of board independence, this study finds evidence that as compared to the having a board independence level of 51% up to 60%, having a board independence level of 61% up to 70% will positively relate to M&A deal performance. No evidence however has been found with regards to the two even higher board independence levels. The same holds for the two other tested components, CEO and Chairman duplicity as well as the number of directors in a board, of which also no significance evidence has been found.

In result, these findings might have general implications for both the academic as well as the business world. Firms for instance might design or redesign their corporate governance structures in line with the findings of this study in order to increase their M&A deal performance. As the results show, CEO stock option ownership is an important mechanism in order to increase the M&A deal performance. Therefore, firms for instance might readjust their remuneration policy. Next to that, firms might rethink the way in which their board of directors has been set-up. Firms which have a board independence level of between 51% and 60% for instance might think of hiring more independent directors as the results of this research have shown that having a board independence level of 61% up to 71% will positively

relate to M&A deal performance as compared to a board independence level of 51% up to 60%. Also from an academic point of view the results of this study add value as new knowledge has been generated in both, the research field of corporate governance as well as M&A. Next to that, another piece to the puzzle has been added to research on potential solutions for the high failure rate of acquisitions.

# 5.1 Discussion

Now that the findings have been shown and the conclusions have been drawn, a discussion on the outcomes will be provided. First of all, the study has found that the main dependent variable of this study, the cumulative abnormal returns to acquiring-firm shareholders surrounding M&A announcements, is positive. The descriptive statistics of Table V have indicated that the average cumulative abnormal return of all the M&A deals within the data sample of this study was 0.004%. Although not very strong, these statistics still show a positive reaction of the market. This is not in line with prior research which has claimed that most M&A deals would negatively impact the shareholder value of an acquiring firm (e.g. Servaes, 1991; Duggal and Millar, 1999; Andrade et al., 2001; Moeller et al., 2005). Although these studies have been based on a different period in time, I do not believe this would be the central explanation for this deviation. One explanation however might be found in the data sample which has been used in this study. As addressed before, while merging the datasets the vast majority of the M&A deal observations was dropped as a result of missing data of any kind. Although this process of dropping data was not based on the cumulative abnormal returns, it might be the case that more deals have been dropped out with a negative cumulative abnormal return as compared to deals with a positive cumulative abnormal return. This however is a speculation and not based on actual data.

As one looks at the results of this study, it is interesting to see the differences between the various corporate governance mechanisms. Based on the different results, one could state that some types of corporate governance might impact M&A deal performance while others do not. The results for instance indicate that no evidence can be found for a relationship between the number of blockholders and M&A deal performance, while the findings do show such a relationship with regards to CEO stock option ownership. Although not based on facts, one might explain this difference as a result of the fact that the M&A practice of a firm has a 'secretive' nature. This, as a result of the fact that in case any information would leak, this immediately could have an impact on the stock price of a firm. The impact of blockholders on M&A performance as compared to other types of decision making might therefore be limited.

Although one would not expect blockholders to leak information, it still might be the case that a firm is more reticent when it comes to providing information on a potential M&A deal as compared to information on for instance aspects of organic growth. Although research has shown that more monitoring would lead to better firm performance, the secretive nature of M&A deal decision making might impact this relationship resulting in less impact of the number of blockholders.

Next to the differences between the various corporate governance components, also differences within specific components have been shown. This for instance is the case with regards to CEO remuneration schemes, indicated by three different variables. Although one should expect to find similar results between those three variables, as all the mechanisms are based upon the same logic reasoning: aligning the interest of the CEO with the interest of the shareholders, only CEO stock option ownership showed positive significant results meaning that CEO stock option ownership is positively related to M&A deal performance. As discussed in the literature review, there are some differences between both types of ownership as well as compensation. Stock options for instance can be seen as being more risk enhancing as compared to regular stock ownership (Wright et al., 2002). Perhaps this might explain the differences found by this study as perhaps it will be necessary to take risks as there always will be uncertainty within an M&A deal. One can perform extensive due diligence and plan the deal in detail but there always will be uncertainty as the deal for instance also is dependent upon cultural issues while integrating the firm. Therefore one cannot be sure that particular calculated synergies can be realized. As a CEO is compensated with stock options, this could mean that he or she will more easily perform M&A deals and in result become better in this. Although this is not proven, one might find an explanation for the difference as a result of this difference in the nature between CEO stock option ownership and CEO stock ownership.

Another interesting finding has been displayed with regards to the board of directors. While no significant results have been found for CEO and Chairman duplicity as well as the number of directors, the independence level of the board has indicated that as compared to an independence level of 51% up to 60%, an independence level of 61% compared to 70% will be more positively related to M&A deal performance. For the higher independence levels, ranging from 71% up to 80% and 81% and more, no such evidence was found. One of the explanations for this might be found by the fact that a too high level of independent directors can also have negative effects. Although having more independent directors would lead to additional monitoring, this also can feel as a burden for the executive directors who are making the decisions. Therefore the executive directors might become less constructive or

even choose those M&A deals which are relatively 'safe' with as a result that the returns on such a deal might not be positively assessed by the shareholders.

Overall, one can state that a rather limited number of findings shows to be significant. Based on the literature review, one would have expected this number to be higher. This, based on the Agency Theory as well as prior studies claiming that the investigated corporate governance components would theoretically result in a better alignment of the interests between the board of directors and the shareholders (Berle and Means, 1932; Jensen and Meckling, 1976; Alchian and Demsetz, 1972; Sheifler and Vishny, 1997). This relative limited number of significant evidence might indicate that agency problems are not the core reason why M&A deals fail or that just some other corporate governance components which not have been tested would relate to this performance.

While looking at potential other factors which might influence M&A deal performance, one for instance might expect that the organizational learning theory will play of influence. This, due to the fact that over the last couple of decades this theory has as well been tested on M&A deal performance in an attempt to explain the previously discussed strong M&A deal failure rate. According to the Organizational Learning Theory, prior experience will lead to better performance and therefore some firms might outperform others (Cyert and March, 1963; Levitt and March, 1988; Fowler and Smidt, 1989). This theory originally has been developed in manufacturing contexts in which simple tasks have been studying in order to see if the production process improved in efficiency in case people became more experienced in performing a simple task. If for instance resulted in findings that processes increased speed and less mistakes had been made. More recently however the theory is also applied on more difficult tasks such as performing an M&A deal. Hitt, Harrison and Ireland (2001) however found that while doing so, the original form of the theory is not applicable due to the complexity of performing an M&A deal. While organizational learning on simple tasks might create a specific form of expertise, for M&A deals organizational learning needs to be explained more in terms of refining routines (Bingham and Eisenhardt, 2007). Also based on prior research claiming a difference between 'lower-level learning', meaning learning from simple tasks and 'higher-level learning', which takes place within strategic activities (Fiol and Lyles, 1985). More recent research on the impact of M&A deal performance therefore claims that more is needed than just an accumulation of dealexperience for a firm in order to develop specific acquisition capabilities (Zollo and Winter, 2002; Zollo and Reuer, 2004). As a result, for instance research by Barkema and Schijven (2008) have been started to study more deliberate types of learning. By deliberate learning,

knowledge will be processed better and as the lessons learned are made more explicitly, these also will be easier to share with other people (Zollo and Winter, 2002). The process of this firm of active leaning consists of knowledge articulation, codification and the transfer of this knowledge to other people within the firm (Zollo and Reuer, 2004). The knowledge transfer for instance might take place via meetings but also for instance via manuals or blueprints (Zollo and Reuer, 2004). This form of learning is better applicable to performing M&A deals and therefore one might expect that in addition of the studied corporate governance components in this study also other factors and theories might be of influence on the M&A deal performance such as deliberate leaning processes.

Next to the fact that other theories might be of influence, also there might be other corporate governance components which influence M&A deal performance, not having been tested in this study. As has been addressed before, corporate governance consists of more than just the three components which have been addressed in this study. While this study for instance has been focusing on the remuneration of a CEO, based on the fact that this is the highest ranked person within a firm and therefore he or she will be the most influential, also other aspects connected to remuneration might be of influence. One for instance might think that not only the remuneration of the CEO is important but also the remuneration of the other directors in the board. In addition also other mechanisms which have not been addressed in this study can play a part in M&A deal performance as one for instance might expect that internal control procedures and internal auditors as well as monitoring by banks and other large creditors will be of influence.

As has been indicated in paragraph 4.1, while the main focus of this study lies on an event window ranging from thirty days prior up to thirty days past an M&A deal announcement, also some other short-term windows have been tested in order to check for differences. For instance analyses have been performed with event windows ranging from one day, three days and five days prior and past an M&A deal announcement. One can conclude that while the event windows get smaller also the level of significant findings decreases. This might indicate that indeed that there are market imperfections as it will take some time before a clear reaction of the market on the M&A deal announcement has been provided. Due to the fact that no evidence has found to be significant in these short-term windows, no clear comparison between the different event windows can be made.

#### **5.2 Limitations**

Although this study has found some interesting results, there are as well some limitations connected to the research. First of all, the way in which the main dependent variable of this study is being measured might raise some questions. Although research has claimed that the Cumulative Abnormal Return of an M&A deal can be seen as a proper measure of M&A deal performance, the methodology requires significant assumptions on the functioning of a stock market. As shown before, the basis for the 'event study method' lies in the semi-strong form of the Efficient Market Hypothesis. This would mean that all the new information will immediately be available to everyone and as a result this will directly be translated into a change in the stock price of a firm. Research however does not fully support these assumptions as there are for instance imperfections such as bounded rationality. Therefore a relatively long term event window has been chosen in order to generate the main dependent variable of this study (CAR). The disadvantage of such a relatively large event window is however the potential of other factors which might influence the cumulative abnormal returns of the stock price of a firm.

A second limitation is the limited availability of data and the sample size of the data sample. While conducting this research, different choices had to be made with regards to the selection criteria of the data. The availability of data on corporate governance mechanisms however was limited influencing these choices. For instance, data with regards to some corporate governance mechanisms was solely available between the years 2007 up to 2011 limiting the amount of data which could be used. As this study entails a relatively broad research question, the data was collected from several databases which were merged in order to generate the variables. In this process of merging, a relatively large part of the collected data was lost due to missing firm specific data in each different dataset. As a result, a large body of observations was dropped out which can be shown by the fact that while this research started out with 462 M&A deal observations, after the merging process only complete observations were available on 148 deals. Overall one can state that the smaller the sample size, the further away the data gets from the entire population and therefore the accuracy of the results will decrease.

Thirdly a limitation can be noticed in the accessibility of the program Eventus which made it impossible to generate event windows larger than 30 days. As said before, this study has focused on a relatively long term event window surrounding an M&A deal announcement. While prior studies show event studies provide windows with a range up to 300 days, the accessibility of the account has a maximum of 30 days. While this still is a

significant event window it could be interesting to test the influence on a broader window.

A fourth limitation can be found in the fact that, the blockholders used in this study have not further been specified. While most studies indicate a blockholder as a shareholder who has at least 5% of the shares, often no distinction is being made between different types of blockholders. Due to a lack of data this also has not been done in this study, however research has shown that different types of blockholders monitor in different ways and therefore as well might relate differently to firm performance (Kahan and Rock, 2006; Cronqvist and Fahlenback, 2009). Research of Tribo, Berrone and Surroca (2007) for instance has shown that various types of blockholders have different influences on a firms R&D expenditure. It therefore might be the case that different types of blockholders also would differently relate to M&A deal performance. Although this limitation was known in advance, most research uses the same measure as there is limited data on the specific types of blockholders.

The last limitation of this study can be found in the fact that there might be reversed causality. This study implicitly assumes a direction of causality from corporate governance mechanisms on the cumulative abnormal returns around M&A deal announcements. However, there might be some endogeneity problems in the assumptions as it perhaps can be the case that the cumulative abnormal returns around an M&A deal announcement can have influence on the corporate governance mechanisms as well. For instance, a firm might decide to reduce or increase the number of directors based on bad cumulative abnormal returns. Although not certain, endogeneity problems might be in place.

## **5.3 Future Research**

The results of this study not only clarified aspects but it also raised some interesting questions. First of all it might be interesting to perform a similar study on European M&A deals. While there currently is a lack in corporate governance data of European based firms it might become possible in the future to perform such research. The reason why this would be interesting is due to the fact that there is a relative large difference between firms within Europe and the United States. La Porta et al., (1999) for instance have shown that the ownership structure of firms substantially differs between both continents. Therefore it would be interesting to perform a similar research but then based on European firms in order to compare the impact of corporate governance mechanisms between both types of firms. Connected to this it might be interesting to also study the effect of external corporate governance mechanism such as legislation as this differs between countries. Would these

Corporate Governance Codes for instance influence differences in M&A performance between countries and which specific regulations are of influence on this performance?

Next to that, another interesting research would be to study the on which aspect investors judge an M&A deal. Do these investors for instance solely look at the targeted party? Or is the target less important and to investors look at past acquisition experiences or a special acquisition capability? And in what way does the image of the corporate governance structure and the image of the board play a part in the decision?

A third interesting research would focus on the personal characteristics of CEOs. Research has shown that individual directors affect various corporate decisions and in result are responsible for much variation in firm practices (Bertrand and Schoar, 2003). As shown in the literature review, the influence of the CEO on M&A practices is relatively large. Therefore it would be interesting to see what character traits CEOs poses and what they value as important as well as their management style.

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