

# Staggered board or skimming board?

The effects of staggered boards on directors' and executives' compensation



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## **Abstract**

In this study, I analyze the relationship between staggered boards and directors' and executives' compensation. I study the level and composition of these compensations, as well as the vesting conditions and their performance goals. I find that executives of firms with staggered boards earn significantly less, both on the performance related and non-performance related part of their compensation, and have lower pay-for-performance sensitivity. For directors, no significant relation is found on level of compensations, but a higher sensitivity to performance is clear. Furthermore, firms with staggered boards set lower threshold and higher targets and maximum performance goals with no difference on vesting conditions. My results indicate that there are several important side effects to staggered boards with respect to managerial compensation.

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## **1. Introduction**

### *1.1 Introduction of the topic*

Staggered boards, also known as classified boards, have been prevalent in America's corporate culture in the past decades. In such boards, directors are divided into different classes, often three, that serve overlapping terms of multiple years, whereas other firms re-elect all directors annually. In most cases, a firm with a staggered board has one third of its directors up for a re-election every year, after which the directors are appointed for a term of three years. This structure, that was used by over half of the firms in the sample of this research until 2010 but has been declining in popularity since, limits the participation of shareholders in corporate nomination decisions therefore significantly. In this study, the effects of such a staggered board are examined, more specifically those on managerial compensation.

The desirability of staggered boards has been the subject of debate (see for example Faleye (2007), Bates et al. (2008) and Masulis et al. (2007)). Proponents of the structure argue that multiyear director appointments contribute to stability, long-term value creation and shields directors from yearly performance pressure. Besides that, multiyear appointment would protect directors who don't admit to executives' will from not being nominated in the next year, thereby increasing board independence and strengthening the supervisory efficiency of the board, something that is for example argued by Koppes, Ganske & Haag (1998). Additionally, some directors prefer to avoid the risk of yearly re-election leading to a larger pool of directors to hire from and improved director quality.

Undisputed is that staggered boards play an important role in the M&A market by acting as antitakeover provisions. Acquiring firms with directors on multiyear terms makes it more difficult for an acquiror to gain effective control. Bebchuk et al. (2002) find that having a staggered board doubles the chance of a firm remaining independent. While antitakeover provisions can protect certain firms from opportunistic acquirers (Humphery-Jenner (2014)), many studies suggest they may generally undermine firm value and shareholder interest (see for example Masulis et al. (2007), Mahoney & Mahoney (2013) and Faleye (2007)).

With the market for corporate control as one of the most important controlling mechanisms for managers, the reduced threat of hostile takeovers decreases managerial performance alignment with shareholders. This can lead to managers extracting value from the firm in their own interests, such as indicated by Bertrand & Mullainathan's (1998) 'skimming model'. This paper dives deeper into this topic and seeks to explore the effect of staggered boards specifically on several areas of directors' and executives' (together: managerial) compensation.

### *1.2 Staggered boards and managerial compensation*

While the effect of staggered boards on managerial compensation is largely unexplored, Faleye (2007) found that firms with staggered boards reward their executives with less performance-sensitive

compensations. This, in his argument, shields them from the poorer firm performance that would otherwise greatly impact their compensation schemes. Although the effect of other aspects of corporate governance on executive compensation has been studied extensively, staggered boards have received limited attention in this context. Core et al. (1999) proved the impact of many corporate governance features, especially board composition and ownership characteristics, on compensation schemes. Similar extensive research has been done on the vesting conditions of options granted to managers (see for example Qu et al. (2018)) and the performance goals linked to grants (see Bettis et al. (2010)).

In this study, I will address this research gap by analyzing the influence of staggered boards on directors' and executives' compensation. Specifically, I address the compensation levels, performance sensitivity, vesting conditions of the options granted and performance goal conditions. I will look whether staggered boards enable directors and executives to skim value from their firms due to the reduced takeover threat. Together, the findings on these subtopics will answer the research question of this paper: does having a staggered board affect the level, composition and conditions of executives' and directors' compensation?

### *1.3 Research design and outline*

The sample used in this study consists of data from multiple databases. Data on antitakeover provisions comes from the ISS Governance database. The IncentiveLab database provides data on compensations, vesting conditions, performance goals and blockholders. Other company data is taken from Compustat. Lastly, other data on the personal level for the directors and executives in the sample comes from the ISS Directors database and the ExecuComp database. Dependent variables include compensation levels, performance sensitivity, vesting conditions, performance conditions and difficulty measures for performance goals. Standard OLS regressions control for industry and year fixed effects, as well as year and firm fixed effects.

I find that executives of firms that have staggered boards have lower overall compensation schemes that are less sensitive to performance. For the compensation of directors, I find a negative relationship between staggered boards and non-performance related compensation, but no significant relation with the performance related part or total compensation. However, directors' compensation shows larger pay-for-performance sensitivity in firms with staggered boards. Furthermore, such firms offer option grants with shorter periods in which vesting is possible, although statistical significance of this result is limited. No significance is found regarding required waiting periods before vesting becomes available and the total vesting period. For the performance goals, the threshold levels are found to be lower but the target and maximum performance levels are higher at firms with staggered boards. Using two metrics to measure difficulty of performance goals, I also found that firms with staggered boards set goals that are easier to achieve. The amount of cumulative performance goals required for payouts is slightly higher at firms with staggered boards. Overall, these findings are partly in line with the expected findings.

This research contributes the following to existing literature. First, this study sheds light on the impact of staggered boards on various aspects of directors' and executives' compensation, complementing Faleye's findings. The study provides a first step for more extensive research on managerial compensation and staggered. Second, the findings of this paper are of corporate relevance for many large firms, both for people in management positions and shareholders. My findings create awareness of the side effects that antitakeover provisions, staggered boards in particular, have and make clear that the misalignment of interests between shareholders and managers in a firm is an issue of reoccurring relevance.

The outline of this paper is as follows. Section 2 gives a more in depth overview of the related literature, including research questions and hypotheses. Section 3 describes the data of the sample and gives an overview of its summary statistics. The methods used for the analysis are presented in section 4, after which the results are provided in the fifth section. Section 6 summarizes and gives a conclusion.

## **2. Theoretical framework**

In this section provides an overview of relevant literature on the topic, the development of the hypotheses and the relevance of the study.

### *2.1 The effects of staggered boards*

Much research has been done on the effects of a staggered board for firms, primarily as antitakeover provisions. As Bebchuk et al. (2002) argue, staggered boards offer antitakeover protection in two ways: by forcing a hostile bidder to wait at least one year to gain control of the board and by requiring such a bidder to win two elections far apart in time rather than a one-time referendum on its offer, both successfully increasing chances to remain independent and reducing likelihood of an accepted first bid.

Bebchuk et al. (2002) also found, however, that shareholders of targets with staggered boards were worse off and that the benefits of a staggered board are limited for shareholders. This finding is confirmed by many other studies (Bebchuk & Cohen (2005), Faleye (2007), Mahoney & Mahoney (1993), Guo et al. (2008)). Although the evidence on this topic seems convincing, it has to be noted that opposite arguments do exist as well. Antitakeover provisions shield hard-to-value firms from opportunistic acquirers (Humphery-Jenner (2014)), this being in the interest of shareholders.

But why does a staggered board affect the market value of a firm? Masulis et al. (2007) confirm that the reduced effectiveness of the market for corporate control as a corporate governance mechanism leads to an increased misalignment of interests between shareholders and managers. Bebchuk & Cohen (2005) identify three potential effects of the implementation of a staggered board. One of these is the change in managerial behavior and incentives, which leads to managers pursuing their own interests more. This

effect will be the focus of this paper. More specifically, I will study the effect increased entrenchment has on managerial compensation.

## *2.2 Consequences of managerial entrenchment on compensation schemes*

The influence of a staggered board on managerial compensation has not been studied extensively, but some papers have paved the way. Bertrand & Mullainathan (1998), found that pay-for-performance sensitivity and mean compensation both increase due to antitakeover legislation. They reason that reduced fears of being taken over allows executives to extract more value from the firm (to ‘skim’ more). Their ‘skimming hypothesis’ entails that an increased protection against potential acquirors leads managers to increase their own pay to the extent that they control it. Faleye (2007) confirms this hypothesis with his findings that staggered boards lead to a lower sensitivity of CEO compensation to firm performance. He argues that, considering the underperformance of firms with staggered boards, these firms shield their CEOs from this underperformance in their compensation.

The effect of staggered boards on vesting conditions of options rewarded is a rather unexplored field. Vesting conditions and managerial entrenchment have been studied more extensively though. In this context, it is clarifying to first consider that there are numerous reasons to believe that shorter vesting periods are in the interests of managers. Hodge et al. (2009) developed a model in which they showed that managers decrease their option valuations when vesting is extended. Furthermore, managers are often rather short-term focused (see e.g. Stein (1989)) and prefer to be awarded on the short term accordingly. Not only does this reduce the price risk related to stock options, it also maximizes the total option payout over time. Edmans et al. (2017) found that managers successfully manipulate stock prices upwards around the time they vest their options, for example by deferring investments or cutting expenses. Options with shorter vesting periods offer the opportunity to boost stock price and increase payout more often, therefore being preferred by managers. Concluding these results, shorter vesting conditions are clearly in the interest of managers. Cadman et al. (2012) confirm this by finding that CEOs with more power are granted options with shorter waiting periods before vesting becomes possible. Qu et al. (2018) found that stronger corporate governance mechanisms are positively related to the required waiting periods of options granted to CEOs. They also found that more powerful CEOs overall receive options with vesting conditions that are less strict. Other studies confirm that weaker corporate governance mechanisms lead to less and lower performance hurdles related to grants (Qu et al. (2018), Bettis et al. (2010)). These findings are in line with the skimming hypothesis: managers that have more control, set compensation schemes to their own wishes. What the exact effect of a staggered board on performance hurdles is, however, remains unclear in the academic field.

### 2.3 Hypothesis development

In this paper, I study the effect of having a staggered board on executives' and directors' compensation. The following research question will be addressed: does having a staggered board affect the level, composition and conditions of executives' and directors' compensation?

Based on the skimming hypothesis and previous findings, the following null hypotheses are formulated:

*H1: executives and board members of staggered boards have equal compensation levels as other executives and board members*

*H2: the compensation plans of executives and board members of staggered boards is equally sensitive to firm performance as compensation plans of other executives and board members*

*H3: executives and board members of firms with staggered boards are granted stock options with equal vesting conditions as their counterparts from firms with non-staggered boards*

*H4: executives and board members of firms with staggered boards have similar performance hurdle conditions in their compensation schemes*

### 2.4 Relevance and contribution

This paper contributes to the existing literature by providing more clarity on the effects that staggered boards on executive and director compensation. I partly repeat previous researches carried out by Faleye and Bertrand & Mullainathan regarding staggered boards and level and performance sensitivity of executive compensation, but with more recent data. I extend their studies further on by analyzing the effect of a staggered board on board members' compensation as well. The study will also further clarify what the effects of staggered boards on vesting conditions and performance hurdles are. These last two topics are not yet discussed in the existing literature and will provide a first insight in the relationship between these variables and staggered boards.

The findings of this study will be useful for both the academic and the corporate world. Academically, the study will contribute to the applicability of the skimming model on previously unexplored aspects of compensation and on board members' compensation. Furthermore, this research is useful for the corporate world as it provides clarity on the effect of staggered boards on managerial compensation. This information is valuable for shareholders, executives and board members.

## 3. Data

This section presents the characteristics of the sample, the data sources and the variables used for the analysis. Furthermore, summary statistics are provided in this section as well.



### 3.1 Sample

The research data is divided in two samples. Sample 1 is grant specific, meaning that each observation is one grant. Sample 2 is performance goal specific, where each observation is a performance goal, related to one of the grants in the first sample. Sample 1 consists of 197.277 unique grants and is used to test hypotheses 1, 2 and 3. Sample 2 consists of 18.994 performance goals and is used to test hypothesis 4.

Both samples contain data from the years 2007 to 2019. 2007 is the starting year of the International Shareholder Services (ISS) Governance database collection, 2019 is chosen as the last year of the sample to rule out potential effects of the COVID pandemic on managerial compensation. Tables 1 and 2 provide the distribution of observations across the years in the samples.

The performance goals in sample 2 are all absolute performance goals, relative performance goals are deliberately left out. The reason for this is that relative performance goals, which are usually linked to the performance of other firms, are more difficult to analyze as the firm to which the goal is set has to be assessed as well. This goes beyond the scope of this study.

Table 1 – spread of observations across years in sample 1

Year spread - performance goals dataset			
Year	Observations	Percentage	Cumulative
2007	698	3,67%	3,67%
2008	1.151	6,06%	9,73%
2009	1.602	8,43%	18,17%
2010	1.461	7,69%	25,86%
2011	1.697	8,93%	34,80%
2012	1.549	8,16%	42,95%
2013	1.560	8,21%	51,16%
2014	1.538	8,10%	59,26%
2015	1.317	6,93%	66,19%
2016	1.585	8,34%	74,54%
2017	1.765	9,29%	83,83%
2018	1.649	8,68%	92,51%
2019	1.422	7,49%	100,00%
<b>Total</b>	<b>18.994</b>	<b>100%</b>	

Table 2 – spread of observations across years in sample 2

Year spread - grant specific data			
Year	Observations	Percentage	Cumulative
2007	9.638	4,89%	4,89%
2008	13.186	6,69%	11,57%
2009	14.071	7,13%	18,71%
2010	14.231	7,22%	25,92%
2011	14.395	7,30%	33,22%
2012	15.409	7,81%	41,03%
2013	15.213	7,71%	48,75%
2014	15.725	7,97%	56,72%
2015	13.832	7,01%	63,73%
2016	17.207	8,72%	72,46%
2017	18.390	9,32%	81,78%
2018	18.900	9,58%	91,37%
2019	17.030	8,63%	100,00%
<b>Total</b>	<b>197.227</b>	<b>100%</b>	

Each grant in the dataset is linked to a person, which is either a director, an executive or, in some cases, both. The dataset contains 19.036 unique persons, on a total of 106.498 person specific observations over all years. Of these 106.498 observations, 36.906 are executives, 73.834 are directors and 4.242 are both. Tables 3, 4 and 5 provide the spread across years of all persons, directors and executives respectively.

Table 3 – spread of person specific observations across years

Year spread - person specific data - Directors & Executives			
Year	Observations	Percentage	Cumulative
2007	5.428	5,10%	5,10%
2008	7.385	6,93%	12,03%
2009	7.869	7,39%	19,42%
2010	7.787	7,31%	26,73%
2011	7.838	7,36%	34,09%
2012	8.312	7,80%	41,90%
2013	8.070	7,58%	49,47%
2014	8.365	7,85%	57,33%
2015	7.230	6,79%	64,12%
2016	9.222	8,66%	72,78%
2017	9.761	9,17%	81,94%
2018	10.077	9,46%	91,40%
2019	9.154	8,60%	100,00%
<b>Total</b>	<b>106.498</b>	<b>100%</b>	

Table 4 – spread of person specific observations across years (directors only)

Year spread - person specific data - Directors			
Year	Observations	Percentage	Cumulative
2007	3.761	5,09%	5,09%
2008	5.147	6,97%	12,06%
2009	5.444	7,37%	19,44%
2010	5.371	7,27%	26,71%
2011	5.430	7,35%	34,07%
2012	5.728	7,76%	41,82%
2013	5.523	7,48%	49,31%
2014	5.791	7,84%	57,15%
2015	4.995	6,77%	63,91%
2016	6.433	8,71%	72,63%
2017	6.790	9,20%	81,82%
2018	7.041	9,54%	91,36%
2019	6.380	8,64%	100,00%
<b>Total</b>	<b>73.834</b>	<b>100%</b>	

Table 5 – spread of person specific observations across years (executives only)

Year spread - person specific data - Executives			
Year	Observations	Percentage	Cumulative
2007	1.954	5,29%	5,29%
2008	2.615	7,09%	12,38%
2009	2.794	7,57%	19,95%
2010	2.781	7,54%	27,49%
2011	2.767	7,50%	34,98%
2012	2.950	7,99%	42,98%
2013	2.878	7,80%	50,77%
2014	2.904	7,87%	58,64%
2015	2.513	6,81%	65,45%
2016	3.090	8,37%	73,83%
2017	3.280	8,89%	82,71%
2018	3.344	9,06%	91,77%
2019	3.036	8,23%	100,00%
<b>Total</b>	<b>36.906</b>	<b>100%</b>	

Lastly, each person in the dataset is employed by one or, in some cases, more firms. Of each firm, there is at least one director, one executive and the CEO in the dataset. There are 861 unique firms in the dataset, on a total of 7.062 firm specific observations (uniquely identified by year and firm) over the years. Table 6 provides the firm observations per year. Table 7 provides the presence of a staggered boards in these firms per year. As can be seen, having a staggered board is of declining popularity in the sample, although a significant amount of firms still has one in the later years of the sample.

Table 6 – spread of firm specific observations across years

Year spread - firm specific data			
Year	Observations	Percentage	Cumulative
2007	369	5,23%	5,23%
2008	496	7,02%	12,25%
2009	538	7,62%	19,87%
2010	537	7,60%	27,47%
2011	537	7,60%	35,08%
2012	565	8,00%	43,08%
2013	554	7,84%	50,92%
2014	561	7,94%	58,86%
2015	481	6,81%	65,68%
2016	593	8,40%	74,07%
2017	619	8,77%	82,84%
2018	636	9,01%	91,84%
2019	576	8,16%	100,00%
<b>Total</b>	<b>7.062</b>	<b>100%</b>	

Table 7 – spread of staggered boards across years

Year spread - staggered boards per year					
Year	Firms	Staggered board		No staggered board	
2007	369	208	56,37%	161	43,63%
2008	496	263	53,02%	233	46,98%
2009	538	273	50,74%	265	49,26%
2010	537	274	51,02%	263	48,98%
2011	537	232	43,20%	305	56,80%
2012	565	218	38,58%	347	61,42%
2013	554	193	34,84%	361	65,16%
2014	561	172	30,66%	389	69,34%
2015	481	140	29,11%	341	70,89%
2016	593	151	25,46%	442	74,54%
2017	619	147	23,75%	472	76,25%
2018	636	150	23,58%	486	76,42%
2019	576	137	23,78%	439	76,22%
<b>Total</b>	<b>7.062</b>				

### 3.2 Data sources

Most data in the samples originates from the IncentiveLab database, which is part of the ISS data library. IncentiveLab contains data on the directors' and executives' compensation, vesting conditions and performance goals. Some firm specific and person specific information is also derived from the IncentiveLab universe, although this data mostly comes from other sources. For the firm specific information, Compustat is used for e.g. total assets, sales levels and the amount of common shares outstanding, the WRDS database is used for financial ratios and return data (book-to-market ratio, ROA

and ROE) and ISS Governance data is used for the antitakeover provision data. The additional person specific information (such as age, tenure, number of shares held, company committee membership and outside directorship) comes from the ISS Directors database for the directors and from ExecuComp for the executives (for the persons who are both director and executive, the ISS Directors data is used). This means that some values for the same variables (for example 'age' and 'tenure') origin from different databases. Although this provides completeness of data for almost all observations, inaccuracies due to different methods of data collection can become a weakness of the dataset on this issue.

### *3.3 Variable descriptions*

The independent variable in this study is the presence of a staggered board. Dependent variables include compensations awarded to the directors and executives and yearly change in these compensations (the compensation variables), the vesting conditions of the options granted (the vesting variables) and the performance hurdles linked to the grants awarded in the sample (the performance variables). The compensation variables consist of a non-performance related part and a performance related part of compensation of directors and executives, and the sum of these. The non-performance related part contains salaries, fees, pension grants and other compensation forms that are rewarded to the director or executive regardless the performance of the company. The performance related part consists of bonuses, stock awards and options awards. For the assessment of the pay-for-performance sensitivity of the compensation schemes, I use the yearly change in the directors' and executives' compensation and the log of these yearly changes. The method used for these regressions is further described in the next section. The vesting variables consist the amount of months after which vesting becomes possible, the length of the period in which vesting is possible and the sum of these: the 'vesting period'. The performance variables consist of the thresholds, targets and maximums of the performance goals set for the managers in the sample. Also, two measures for difficulty to achieve the target are employed. Lastly, the amount of performance goals that have to be cumulatively achieved to obtain the grant is also a dependent variable.

The control variables used fall into three categories: other antitakeover provisions, firm characteristics and corporate governance variables. Other antitakeover provisions in the sample are the possibility of using blank check preferred stock, confidential voting, cumulative voting, having dual class shares, having unequal voting rights, having a golden parachute, having a poison pill, having a limited ability to amend the bylaws or the charter, having a limited ability to call a special meeting, having a limited ability to act by written consent and the requirement of a supermajority of votes (defined as 66% or more) to approve a merger. The potential significance of these variables has been proven by Gompers et al. (2003), and further on by Bebchuk et al. (2004) and Masulis et al. (2007).

Firm characteristics are total assets, sales, investment opportunity (defined as the average market-to-book ratio of the past 5 years), Tobin's Q, leverage ratio and ROA. These control variables are derived

from Core et al. (1999), and used to proxy for firm size, growth opportunities, profitability and riskiness. In line with earlier literature (Rosen (1982) and Smith & Watts (1992)), I control for the possibilities that these features affect managerial compensation.

Corporate governance variables are also on the firm level and consist of board size and the board composition (amount of outside directors / total amount of directors), the percentage of old (69 or older) outside directors, the CEO being close to retirement (62 or older) the percentage of busy outside directors, the chairmen of the remuneration and nomination committee being outside directors, the percentage of shares owned by the CEO(s), the CEO being new, duality of CEO and chairmanship and dummies for blockholders of 5%, 1%, 0.5% and 0.1% being present. On the person-specific level, the percentage of shares held by the individual is also used as a control variable. Using share ownership to control for increased alignment of interests is a suggestion from Faleye (2007), which I follow. The percentage of busy outside directors is used by Core et al. (1999) as well to measure decreased director quality. Average busyness of directors is another way of measuring this and is, among others, also used by Shivdasani (1993). I tested both measures for completeness (test results are unreported), but decided to include only the percentage of busy outsiders in the regression as this seems more effective. Board size and board composition are also included following the study from Faleye (2007) as he finds that these variables significantly affect CEO compensation. The percentages of outside directors older than 69 is suggested by Core et al. (1999) and is found to be of significant influence on managerial compensation. The CEO being close to retirement (62 or older) is suggested by Dechow & Sloan (1991) as it tends to heighten the conflict of remuneration. The chairmen of the remuneration and nomination committees being independent are control variables used to proxy for other insiders' control of the nominating and remuneration decisions. I include them as I follow Qu et al (2018) in this decision. CEO ownership, duality and the presence of blockholders are again all suggested by Core et al. (1999) and mean to control for increased interest alignment and the strength of corporate governance mechanisms. Having a new CEO is a suggestion from Cadman et al. (2012) and is used for decreased CEO control in the firm.

### *3.4 Summary statistics*

Tables 8 to 12 present the summary statistics of the sample. Table 8 gives the summary statistics on the firm level, tables 9 and 10 on the director and executive specific level, table 11 on the grant level and table 12 on the performance goal specific level. A correlation matrix can be found in the appendix.

#### Table 8 – summary statistics on firm level

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. CSHO is common shares outstanding, in millions of units. Sales is the firm's yearly revenue from sales, in millions of dollars. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board size is the firm's number of directors. Board composition is the amount of outside directors over the total

number of directors. Shares owned by CEO(s) is the percentage of shares that the CEO holds. ROA is return on assets. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Rem. Chair independent is a dummy variable equal to 1 if the chairman of the remuneration committee is an independent director, 0 otherwise. Nom. Chair independent is a dummy variable equal to 1 if the chairman of the nomination committee is an independent director, 0 otherwise. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Percentage of busy directors is the percentage of directors that is in 3 or more other boards. Total outsiders is the amount of outside directors within the board. Total outsiders 69 is the amount of outside directors that is 69 years or older. Old CEO is a dummy variable equal to 1 if the firm has a CEO of 62 or older in that year. New CEO is a dummy variable equal to 1 if the firm has a CEO that is in his/her first year as CEO of that company. Blank check preferred is a dummy variable equal to 1 if the firm has the possibility to create a new preferred stock class without shareholder approval, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise.

Firm specific summary statistics

Variable	N	Mean	Q1	Median	Q3	Std
Staggered board	7.062	0,4	0,0	0,0	1,0	0,5
Total assets	7.062	19.850,7	2.466,5	6.059,5	19.110,3	34.195,8
Leverage ratio	7.034	0,3	0,1	0,2	0,4	0,2
csho	7.062	374,7	72,1	144,1	338,9	798,4
Sales	7.062	12.857,5	1.990,9	4.360,0	11.406,9	24.860,0
Duality	7.062	0,5	0,0	0,0	1,0	0,5
Board size	7.062	10,5	9,0	10,0	12,0	2,7
Board composition	7.062	0,8	0,7	0,8	0,9	0,1
shares owned by CEO	7.062	0,0	0,0	0,0	0,0	0,1
ROA	7.062	0,2	0,0	0,1	0,2	0,1
Investmentopp	7.062	3,5	1,6	2,6	4,2	2,8
Rem. Chair independent	7.062	0,9	1,0	1,0	1,0	0,3
Nom. Chair independent	7.062	0,9	1,0	1,0	1,0	0,3
blockholder5	7.062	0,0	0,0	0,0	0,0	0,1
blockholder1	7.062	0,0	0,0	0,0	0,0	0,1
blockholder05	7.062	0,0	0,0	0,0	0,0	0,2
blockholder01	7.062	0,5	0,0	0,0	1,0	0,5
Percentage busy directors	7.062	7,4	0,0	4,4	12,5	9,2
Total outsiders	7.062	7,9	6,0	8,0	9,0	2,1
Total outsiders69	7.062	2,1	1,0	2,0	3,0	1,6
Old CEO	7.062	0,3	0,0	0,0	1,0	0,5
New CEO	7.062	0,1	0,0	0,0	0,0	0,3
Blank check preferred	7.062	0,9	1,0	1,0	1,0	0,2
Confidential voting	7.062	0,2	0,0	0,0	0,0	0,4
Cumulative voting	7.062	0,0	0,0	0,0	0,0	0,2
Dual class shares	7.062	0,1	0,0	0,0	0,0	0,2
Golden parachute	7.062	0,8	1,0	1,0	1,0	0,4
Poison pill	7.062	0,1	0,0	0,0	0,0	0,3
Supermajority to approve merger	7.062	0,2	0,0	0,0	0,0	0,4
Unequal voting rights	7.062	0,0	0,0	0,0	0,0	0,2

Table 9 – summary statistics on person level (directors)

DirNoRisk is the non-performance related part of the director's compensation, independent on firm performance in thousands of US dollars. DirRisk is the part of the director's compensation that depends on firm performance in thousands of US dollars. DirTotalComp is the sum of DirRisk and DirNoRisk. Age is director's age in years. Tenure is the director's tenure in years. Ownership is the percentage of shares the director holds. CEO is a dummy variable equal to 1 if the directors is also CEO. New is a dummy variable equal to 1 if the director is in his/her first year as a director at the firm. Chair is a dummy variable equal to 1 if the director is Chairman of the board. Outside public boards is the number of other public boards the director is in.

Director specific summary statistics						
Variable	N	Mean	Q1	Median	Q3	Std
DirNoRisk	73.834	236.836,4	63.000,0	94.500,0	127.500,0	904.941,3
DirRisk	73.834	622.502,4	82.500,0	127.501,0	180.026,0	7.576.756,0
DirTotalComp	73.834	877.948,4	169.991,0	234.101,0	299.975,0	7.813.028,0
Age	64.150	63,1	58,0	64,0	69,0	11,0
Tenure	63.868	9,0	3,0	7,0	12,0	7,8
Ownership	73.834	0,0	0,0	0,0	0,0	0,2
CEO	73.834	0,0	0,0	0,0	0,0	0,2
New	73.834	0,1	0,0	0,0	0,0	0,3
Chair	73.834	0,1	0,0	0,0	0,0	0,3
Outside public boards	73.834	0,8	0,0	1,0	1,0	1,1

Table 10 – summary statistics on person level (executives)

ExNoRisk is the non-performance related part of the director's compensation in thousands of US dollars. ExRisk is the part of the director's compensation that depends on firm performance in thousands of US dollars. ExTotalComp is the sum of ExRisk and ExNoRisk. Age is executive's age in years. Tenure is the executive's tenure in years. Ownership is the percentage of shares the executive holds. CEO is a dummy variable equal to 1 if the executive is CEO. New is a dummy variable equal to 1 if the executive is in his/her first year as an executive at the firm. Outside public boards is the number of other public boards the executive is in.

Executive specific summary statistics						
Variable	N	Mean	Q1	Median	Q3	Std
ExNoRisk	36.906	1.100.652,0	483.800,0	718.630,5	1.194.873,0	1.410.921,0
ExRisk	36.906	3.422.160,0	999.734,0	1.934.199,0	4.025.662,0	5.461.585,0
ExTotalComp	36.906	4.522.341,0	1.614.725,0	2.812.686,0	5.343.213,0	6.051.460,0
Age	26.848	54,2	50,0	54,0	59,0	6,7
Tenure	10.286	9,9	3,0	7,0	14,0	8,9
Ownership	36.906	0,1	0,0	0,0	0,0	0,2
CEO	36.906	0,2	0,0	0,0	0,0	0,4
New	36.906	0,1	0,0	0,0	0,0	0,3
Outside public boards	36.906	0,1	0,0	0,0	0,0	0,4



Table 11 – summary statistics on grant level

vestingLength is the amount of months the director/executive has to vest the options granted. Start vesting period is the amount of months the director/executive has to wait to vest his/her options for the first time. nonEquityThreshold is the payout the director/executive receives at the threshold level of the performance goal for payouts that are not in equity. nonEquityTarget is the payout the director/executive receives at the target level of the performance goal for payouts that are not in equity. nonEquityMax is the payout the director/executive receives at the maximum level of the performance goal for payouts that are not in equity. EquityThreshold is the payout the director/executive receives at the threshold level of the performance goal for payouts that are in equity. EquityTarget is the payout the director/executive receives at the target level of the performance goal for payouts that are in equity. EquityMax is the payout the director/executive receives at the maximum level of the performance goal for payouts that are in equity. Cumulative perf. goals is the amount of performance goals the director/executive has to achieve cumulatively to obtain any payout of that grant.

Full sample summary statistics							
Variable	N	Mean	Q1	Median	Q3	Std	
vestinglength	47.224		29,0	24,0	24,0	36,0	10,5
Start vesting period	47.243		13,6	12,0	12,0	12,0	7,3
nonEquityThreshold	28.034	170.048,4	2.366,0	106.250,0	239.400,0	196.668,0	
nonEquityTarget	28.034	640.885,7	276.250,0	450.000,0	826.462,0	510.170,6	
nonEquityMax	28.034	1.323.672,0	540.900,0	901.600,0	1.725.000,0	1.099.016,0	
EquityThreshold	24.668	10.300,2	915,0	37.500,0	11.000,0	1.6391,2	
EquityTarget	24.668	35.231,2	6.497,0	14.800,0	35.932,0	52.733,0	
EquityMax	24.668	62.477,0	11.907,0	26.944,0	65.507,0	90.328,000	
Cumulative perf. Goals	67.678		1,6	1,0	1,0	2,0	1,4

Table 12 – summary statistics on performance goal level

Cum. performance goals is the amount of cumulative performance goals that all have to be achieved to obtain the grant. EPS goal threshold is the level of earnings (EPS multiplied by shares outstanding) the director/executive has to achieve to obtain a threshold payout for that grant, in millions of dollars. EPS goal target is the level of earnings (EPS multiplied by shares outstanding) the director/executive has to achieve to obtain a target payout for that grant, in millions of dollars. EPS goal max is the level of earnings (EPS multiplied by shares outstanding) the director/executive has to achieve to obtain a maximum payout for that grant, in millions of dollars.  $\Delta$  EPS target - ind. avg. is the difference between the EPS target performance goals and the industry average EPS. Ex post is a dummy variable equal to 1 if the performance goal was not achieved and 0 otherwise.

Performance goal summary statistics							
Variable	N	Mean	Q1	Median	Q3	Std	
Cum. performance goals	18.972		1,8	1,0	1,0	2,0	1,7
EPS goal threshold	11.079		3,8	1,3	2,4	4,1	15,4
EPS goal target	18.953		3,6	1,5	2,6	4,4	4,3
EPS goal max	11.079		4,5	1,8	3,1	5,6	5,6
EPS goal thr. * CSHO	9.535	1.326,9	188,6	409,2	1.069,6	3.763,9	
EPS goal tgt. * CSHO	9.535	1.458,6	226,2	473,8	1.267,4	3.742,7	
EPS goal max. * CSHO	9.535	1.658,7	259,0	534,3	1.421,7	4.161,9	
$\Delta$ EPS target - ind. avg.	9.535		3,5	-602,5	-225,3	324,6	3.525,5
Ex post	14.863		0,5	0,0	1,0	1,0	0,5

#### 4. Methods

In this chapter, I will elaborate on the way in which the four hypotheses mentioned in the theoretical framework are tested. Having a staggered board or not is the independent variable in all hypotheses. All hypotheses are tested through OLS regressions with robust standard errors.

*H1: executives and board members of staggered boards have equal compensation levels as other executives and board members*

To test the first hypothesis, the total compensation of directors and executives is used as the dependent variable. Following Bertrand & Mullainathan (1998), I hypothesize that antitakeover provisions lead to increased compensations due to increased corporate power. There is no existing research of the effect of having a staggered board on directors' compensation. I select control variables for the regressions to test this hypothesis based on earlier research from Faleye (2007) and Core et al. (1999). In all regressions, I control for year and industry fixed effects and year and firm fixed effects.

*H2: the compensation plans of executives and board members of staggered boards is equally sensitive to firm performance as compensation plans of other executives and board members*

For the second hypothesis, I study the pay-for-performance sensitivity of the compensation. To analyze this sensitivity, two measures are often used in related literature. The first measure is the one introduced by Jensen & Murphy (1990) (also used by Yermack (1996) and Faleye (2007)). In this measure, the pay-for-performance sensitivity is defined as the dollar change in compensation per \$1000 change in shareholder wealth. This change can be found by regressing annual compensation changes on annual changes in shareholder wealth. The second popular measure for studying pay-for-performance sensitivity is the one introduced by Hall & Liebman (1998) (also used by Hall & Knox (2003), Core & Guay (1999) and Core & Guay (2001)). This method regresses the log change in managerial reward on the percentual change of firm value in a fiscal year to express pay-for-performance sensitivity. For both measures, I calculate the change in shareholder wealth by multiplying the shareholder return by the firm's market value at the end of the year. I follow Faleye's (2007) approach by analyzing both the total compensation and the part of the compensation paid in cash to control for price shocks affecting the value of equity payments. I use interaction terms of the staggered board dummy with the change in shareholder wealth to study the effect of the staggered board on the pay-for-performance sensitivity. The same control variables I use for testing H1 are employed.

Both measures provide a useful insight into the pay-for-performance sensitivity of managerial compensation. Baker & Hall (2003) argue that the Jensen & Murphy-measure is most appropriate when analyzing incentives to allocate resources whereas the Hall & Liebmann-measure is most appropriate when analyzing incentives to embark on strategies that scale with firm size. Hall & Knox (2004) consider the same. Following these studies, I use both measures to assess the pay-for-performance sensitivity.

In line with the skimming hypothesis and given the risk-aversity of managers, the increased control of managers on the compensation setting process at firms with staggered boards is hypothesized to lead to lower pay-for-performance sensitivities. Control variables used in the regressions are similar to those used in the first hypothesis. Again, I control for year and industry fixed effects and year and firm fixed effects in all regressions.

*H3: executives and board members of firms with staggered boards are granted stock options with equal vesting conditions as their counterparts from firms with non-staggered boards*

In the analysis of the third hypothesis, the length of the period in which vesting is possible and the amount of months the director or executive has to wait before the vesting is possible are the dependent variables. In some studies (such as Cadman et al. (2012)), the vesting period, which is the sum of these two periods, is the main dependent variable. I split the vesting period in the required waiting time and the time in which vesting is possible to give a more accurate view of the vesting conditions. Furthermore, I also include the full vesting period so that my results can be compared with other studies. Based on the skimming hypothesis and findings of Cadman et al. (2012), I hypothesize that firms with staggered boards give out options with shorter waiting periods before vesting becomes possible. Considering findings of Qu et al. (2018), I also hypothesize that firms with staggered boards give out options with longer periods in which vesting is possible, giving managers a better chance to maximize their payoff. Although it might take longer for directors and executives to obtain the grant when this period is longer, the rise in expected payout offsets the potential longer waiting period. Control variables used in these regressions are taken from the two papers mentioned above. Again, I control for year and industry fixed effects and year and firm fixed effects.

*H4: executives and board members of firms with staggered boards have similar performance hurdle conditions in their compensation schemes*

Lastly, for the fourth hypothesis, I want to test whether managers from firms with staggered boards have performance goals that are easier to achieve. Following Kuang & Qin (2009), I focus on performance goals that have earnings per share as performance metric. This is a very common metric for performance goals and is relatively easy to compare across firms. I use three measures of performance hurdles, introduced by Kuang & Qin (2009) as well. The absolute measure is the level of required performance for the threshold, target and maximum payouts. This measure is expressed as earnings per share in dollars. The relative measure is the difference between the target performance goal and the industry average EPS, also expressed in dollars. The ex post measure is a dummy variable that equals 1 if the goal is not achieved and 0 otherwise. In line with the skimming hypothesis, I hypothesize that firms with staggered boards have lower threshold, target and maximum performance requirements. The performance goals in the sample consists of absolute levels of EPS that have to be achieved, or growth levels. For the observations where the performance goal is a growth level, the absolute value of EPS to

which this growth level translates is calculated and used as performance metric. Continuingly, I look at the amount of performance goals that have to be achieved cumulatively to achieve the performance payout. Where I only look at EPS related performance goals in the previous measures, I constructed a count of performance goals of all categories that have to be achieved cumulatively for this measure. I hypothesize that firms with staggered boards have less cumulatively required performance goals per grant. The control variables used for these regressions are selected based on findings from Bettis et al. (2010). I control for year and industry and year and firm fixed effects again.

## 5. Results

The results of the hypothesis tests and their interpretations are presented in this section, as well as limitation of the research.

### *5.1 Results of the hypotheses*

This chapter gives an overview and interpretation of the results of the regressions used to test the four hypotheses. In all tables, significance is marked at the 10% (\*), 5% (\*\*) and 1% (\*\*\*) level.

*H1: executives and board members of staggered boards have equal compensation levels as other executives and board members*

Tables 13 and 14 provide the results of the regressions on the non-performance related and the performance related part of the directors' and executives' compensations, and the total of the compensations. Surprisingly, having a staggered board seems to negatively affect the level of non-performance related compensation. Directors from firms with a staggered board earn on average \$14.204 (regression 1) or \$20.703 (regression 2) less in non-performance related rewards than their counterparts from firms with a unitary board. Given that the mean non-performance related reward for directors in the dataset is \$94.500 (see table 8), this effect is economically significant as the drop in non-performance related compensation is 15-21%. The effect of the staggered board is not statistically significant in the regressions on the performance related compensation and only marginally significant for the regressions on the total compensation.

According to table 14, executives from firms with a staggered board have a non-performance related compensation that is \$41.949 (regression 1) to \$53.181 (regression 2) lower compared to executives from other firms (a 5-8% reduction compared to the mean in the dataset). Also, their performance related compensation is \$401.508 (regression 1) to \$261.147 (regression 2) lower (a 13-21% reduction). Lastly, their total compensation is \$445.329 (regression 1) to \$315.206 (regression 2) lower (a 11-16% reduction). These results are economically and statistically significant.

For the directors, hypothesis 1 can be rejected, but only for the non-performance related part of the compensation. Hypothesis 1 can be rejected for all parts of the compensation for the executives.

Although being able to reject the first hypothesis, the effects visible in tables 13 and 14 were not as hypothesized by the skimming hypothesis. The compensations rewarded to managers is lower, especially for executives. It might be the case that directors and executives pay a price in their compensation for their increased job security. This could be a topic for further research. These results are also not in line with those from existing research of Bertrand & Mullainathan (1998) and Core et al. (1999), who found that increased managerial entrenchment leads to higher compensation.

*H2: the compensation plans of executives and directors of staggered boards consists for an equal part of performance based compensation as compensation plans of other executives and board members*

The regression results for the impact of staggered boards on pay-for-performance sensitivity are reported in tables 15 to 18. Table 15 shows the pay-for-performance sensitivity for directors' compensation according to the Jensen & Murphy measure. The interaction term with the staggered board variable is statistically significant at the 5% level in regression 1 and at the 10% in regression 2 for the total compensation. For the cash compensation regressions, the results are significant at the 1% level in all three regressions. The results can be interpreted as follows: directors from firms with staggered boards have a \$17.923 higher total compensation (regression 1) and a \$2.692 higher cash compensation (regression 1), given a \$1 million dollar increase in shareholder returns, compared to directors from firms with unitary boards. The statistical significance of these results is undoubted. Given the median director compensation of \$94.500, the effect of a staggered board on pay-for-performance sensitivity has an economic significance as well: it increases the cash compensation with about 3% given the \$1 million increase in shareholder return. For executives, the Jensen & Murphy measure gives even more significant results. In all regressions, except regression 3 for the total compensation, the staggered board interaction term is statistically significant at the 1% level. Surprisingly, the coefficients are all negative for the total compensation regressions and positive for the cash compensation regressions. This should be interpreted as follows: given an increase in shareholder return of \$1 million, the total compensation is \$21.548 lower and the cash compensation is \$16.220 higher for executives from firms with a staggered board compared to other executives. On a median cash compensation of \$718.630,50, this is an effect of 2-3%.

These results show that both directors and executives from firms with staggered boards have a lower pay-for-performance sensitivity than their counterparts from firms with a unitary board. This is in line with the skimming hypothesis: directors and executives manage to shield themselves from the risk that their compensation is exposed to. The decreased pay-for-performance sensitivity is similar to Faleye's (2007) findings as well, although he found a negative coefficient for the cash compensation sensitivity as well, where mine is positive.

Table 17 provides the regression results of the impact of staggered boards on the pay-for-performance sensitivity of directors with the Hall & Liebman method for measuring pay-for-performance. The

staggered board interaction variable is positive and statistically significant in regressions 1 and 2 for the total compensation regressions. In the other regressions, the staggered board interaction variable is not significant. This can be interpreted as: given a 1% increase in market value, the total compensation of directors from firms with a staggered board increases with 0,003% compared to directors from other firms.

Table 18 presents the results for the Hall & Liebman pay-for-performance sensitivity for executives. The staggered board interaction term is significant at the 5% level for regression 1 of the total compensation regressions and at the 1% level at regression 2 and 3 for the cash compensation regressions. The results are all positive at value 0,001. This can be interpreted as: given a 1% increase in market value, both cash and total compensation rise 0,001% compared to executives from other firms.

It is surprising that these pay-for-performance measures give opposite results for the total compensation regressions. Both for directors and executives, the statistical significance seems again undoubted. The economic significance, however, is lower than with the Jensen & Murphy measure. Mainly due to the strong results of this first measure, the second hypothesis can be rejected.

*H3: executives and board members of firms with staggered boards are granted stock options with equal vesting conditions as their counterparts from firms with non-staggered boards*

Tables 19, 20 and 21 present the regression results for the third hypothesis, regarding the vesting conditions. As explained in section 4, I examined whether the presence of a staggered board in a firm leaves directors and executives with equal periods in which options can be vested (table 19), equal waiting periods before vesting becomes possible (table 20) and equal total vesting periods (table 21).

The staggered board variable is only statistically significant at the 10% level for regression 2 of table 19. Opposite to the skimming hypothesis, the period in which vesting is possible is 0,33 months shorter for managers at firms with a staggered board compared to managers of other firms. Compared to other studies on managerial entrenchment and vesting conditions (Cadman et al. (2012), Qu et al. (2018)), no similarity in results is found either. The results are of limited statistical significance and are not economically meaningful. The waiting period and total vesting period of the options rewarded is not statistically different at firms with staggered boards. These results are economically and statistically insignificant. The third hypothesis cannot be rejected.

*H4: executives and board members of firms with staggered boards have similar performance hurdle conditions in their compensation schemes*

Tables 22 to 27 visualize the results of the regressions used to test the fourth hypothesis. The first three tables (22-24) provide the earnings threshold, target and maximum levels of the performance goals. The dependent variables are the threshold, target and maximum levels of total earnings (EPS multiplied by common shares outstanding), to control for differences in amount of shares outstanding.

In table 22, the staggered board variable is statistically significant at the 1% level in regression 3. In table 23, the staggered board variable is statistically significant at the 1% level in regression 1 and at the 10% in regression 2. Table 24 shows again only one regression where the staggered board variable is significant, in regression 1 it is at the 1% level. The results indicate that directors and executives from firms with a staggered board receive options that on average have a threshold level of earnings that is \$656.408.000 lower, a target level of earnings that is \$172.246.000 higher and a maximum level of earnings that is \$212.492.000 higher compared to managers from firms with a unitary board. Given that the median levels of total earnings are \$409 million at threshold, \$473 million at target and \$534 million at maximum levels, these results are of economic significance.

Continuing, table 25 shows the difference between the target EPS levels set as performance hurdle for options rewarded and the industry average EPS. This measure indicates how easy the target performance hurdle is to jump. According to regression 3 of table 25, firms with a staggered board give out options with performance goals that have earnings targets of \$89 million below the industry average. This is in line with the skimming hypothesis.

Table 26 shows the regression results of the ex post variable. This dummy variable is equal to 1 if the performance goal target was not achieved in the next year and is 0 otherwise. The results are statistically significant in regressions 2 and 3. The negative coefficients show that firms with staggered boards set performance goal targets that are overall more achieved than performance goal targets at other firms. This is in line with the skimming hypothesis as well.

**Table 13 – regression results of directors' compensation (compensations are in thousands of dollars)**

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm's number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the director holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. ROA is return on assets. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

Variables	Non-performance related			Performance related			Total Compensation		
	1	2	3	1	2	3	1	2	3
Staggered board	-14,2 **	-20,7 ***	3,4	-70,8	-43,2	40,8	-80,3 *	-63,4	44,0
Board size	-8,1 ***	-7,4 ***	-4,3	-54,0 ***	-40,5 ***	-18,4 **	-63,1 ***	-48,6	-23,1 **
CEO ownership	-58,0	-46,0 *	67,6	-1515,1 *	-1450,2 *	-896,7 ***	-1595,6 *	-1520,0	-851,5 **
Person's ownership	92,6	92,3	98,2	2381,0	2380,7	2367,1	2491,5	2490,3	2483,1
Blockholder5	-31,5	-30,9	11,5	-292,6	-228,3	-300,0	-354,3 *	-295,0	-324,2
Blockholder1	32,4	28,2	19,8	336,6	318,3	32,5	408,8	380,9	24,5
Blockholder05	-15,4	-18,4	1,6	-331,2	-311,1	-7,6	-344,7	-332,5	46,8
Blockholder01	-16,0 ***	-12,2 *	-3,8	-81,7	-82,6 **	-7,3	-102,7 *	-97,2	-9,2
Poison Pill	-13,9 *	-21,5 **	-25,4 **	-69,2 **	-39,3	-28,4	-78,5 **	-66,9	-60,0
Golden Parachute	21,5 ***	23,5 ***	27,7 *	-25,83,0	-63,7	41,0	-6,6	-40,9	66,7
Confidential voting	17,8 *	14,8 *	-39,6	-4,6	32,3	21,9	20,3	52,7	6,2
Cumulative voting	-12,4	-10,4	-28,4	-33,4	-16,0	-79,4	-51,8	-35,2	-113,7
Dual class shares	89,4 ***	83,6 **	-58,6	263,4	327,6	-82,2	348,4	394,7	-188,8
Supermajority req.	8,8	4,5	-1,9	-37,0 *	3,7	58,5	-19,4	10,7	60,9
Unequal voting rights	22,4	20,6	21,5	572,5	481,9	33,8	596,1	524,7	75,0
ROA	78,7 **	44,6	90,5 *	482,9	361,2	562,0 *	574,9	405,1	644,7 *
Total assets	0,0 ***	0,0 ***	0,0	0,0 ***	0,0 ***	-0,0	0,0 ***	0,0	-0,0
Leverage ratio	82,3 ***	74,5 ***	-57,7	-230,5	-217,4 *	-42,4	-154,1	-138,8	-121,5
Sales	0,0 ***	0,0 ***	0,0	0,0	0,0	-0,0	0,0	0,0	-0,0
Investment opp	-2,1	-1,4	1,4	39,5 ***	35,7 ***	24,0	37,6 ***	35,0	26,3
Duality	163,5 ***	155,1 ***	114,4 ***	583,8 ***	601,4 ***	517,3 ***	774,5 ***	780,5	654,9 ***
Board Composition	-192,8 ***	-206,6 ***	-58,2	-362,3	-314,6	270,8	-573,6 **	-532,2	210,9
Percentage busy	0,7 **	0,5	0,2	3,4	2,8	3,8	4,2 *	3,2	3,9
Outsiders69	12,5 ***	11,7 ***	8,0 ***	26,4 ***	17,5 ***	24,0	38,6 ***	29,7	32,1
Constant	263,7 ***	277,7 ***	235,2 ***	895,9 ***	757,8 ***	499,1 ***	1188,0 ***	1055,7	755,0 ***
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	2,91%	2,34%	5,74%	0,64%	0,69%	2,27%	0,84%	0,83%	2,51%
N	73.597	73.597	73.597	73.597	73.597	73.597	73.597	73.597	73.597



**Table 14 – regression results of executives’ compensation (compensations are in thousands of dollars)**

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm’s number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons’s ownership is the percentage of shares the executive holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders’ vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm’s voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. ROA is return on assets. Total assets is value of all the firm’s assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm’s yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm’s market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm’s CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

Variables	Non-performance related			Performance related			Total Compensation		
	1	2	3	1	2	3	1	2	3
Staggered board	-41,9 ***	-53,2 ***	6,6	-401,5 ***	-261,1 ***	1,9	-445,3 ***	-315,2 ***	7756,8
Board size	39,9 ***	40,6 ***	26,4 ***	-11,1	48,2 ***	32,8	28,5	88,7 ***	60,1 **
CEO ownership	-290,2 **	-182,1	223,5	-1435,0 ***	-1220,6 ***	-102,9	-1725,1 ***	-1407,9 ***	127,8
Director ownership	-86,8 ***	-98,5 ***	-30,3 **	-104,8	-141,7	-113,1	-188,9	-237,3 *	-141,6
Blockholder5	90,3	34,5	66,9	-581,1 ***	-415,5 **	-37,0	-490,1 **	-382,9 *	28,7
Blockholder1	-79,0	-70,7	-150,1	-654,0	-652,4 *	-572,4	-733,6	-721,2	-718,2
Blockholder05	73,2	2,4	27,9	141,1	421,1	278,4	215,1	425,6	308,3
Blockholder01	-91,1 ***	-72,9 ***	-10,3	-127,4 **	-255,1 ***	-77,4	-221,8 ***	-332,2	-91,1 *
Poison Pill	-48,4 ***	-91,3 ***	-81,2 ***	-439,4 ***	-170,0 ***	-29,0	-491,0 ***	-263,7 ***	-110,8
Golden Parachute	143,3 ***	116,1 ***	37,8	117,6 *	-173,6 **	164,7 **	258,2 ***	-61,7 ***	200,9 **
Confidential voting	42,1 *	29,8	-129,4 **	-160,5 *	56,2	351,1	-113,7	91,7	220,3
Cumulative voting	-22,9	-8,0	-40,2	-400,9 ***	-321,2 ***	41,1	-428,3 ***	-333,1 ***	-4,1
Unequal voting rights	292,6 ***	168,7 ***	-33,9	579,0 ***	841,1 ***	-509,7	860,5 ***	997,7 ***	-545,0
Dual class shares	47,1 ***	19,2	-20,1	-209,1 ***	8,9	216,5 ***	-160,9 ***	29,4	191,5 **
Supermajority req.	143,6 **	169,1 ***	272,2 ***	876,8 ***	341,3	322,6	1041,9 ***	531,0 *	617,9 **
ROA	194,9 ***	-49,9	158,4	1547,4 ***	1448,4 ***	2040,2 ***	1739,9 ***	1393,9 ***	2178,0 ***
Total assets	0,0 ***	0,0 ***	0,0 **	0,0 ***	0,0 ***	0,0 ***	0,0 ***	0,0 ***	0,0 ***
Leverage ratio	381,4 ***	250,0 ***	-14,0	-203,3	-139,5	-519,3	178,5	112,5	-536,6
Sales	0,0 ***	0,0 ***	0,0	0,0 ***	0,0 ***	0,0	0,0 ***	0,0 ***	0,0
Investment opp	-5,1	4,6	4,7	178,2 ***	131,8 ***	68,7 ***	173,3 ***	136,3 ***	71,1 ***
Duality	248,7 ***	198,6 ***	57,1 **	-90,7	64,4	363,3 ***	159,4 **	265,3 ***	418,5 ***
Board Composition	-37,2	-61,9	21,9	-833,1 ***	-533,0 **	-328,1	-868,7 ***	-591,2 **	-303,3
Percentage busy	4,5 ***	4,2 ***	0,0	12,7 ***	11,2 ***	2,2	17,4 ***	15,7 ***	2,6
Outsiders69	28,2 ***	27,5 ***	7,9	76,4 ***	57,5 ***	46,9 **	104,9 ***	85,4 ***	55,2 **
Constant	124,8 **	234,8 ***	614,0 ***	2303,4 ***	1752,0 ***	1585,3 ***	2429,6 ***	1986,3 ***	2198,5 ***
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	11,27%	13,05%	26,58%	13,18%	14,97%	26,03%	15,62%	17,27%	27,97%
N	36.772	36.772	36.772	36.772	36.772	36.772	36.772	36.772	36.772

**Table 15 – Director pay-for-performance sensitivity (Jensen & Murphy measure)**

The dependent variable is the change in directors' cash and total yearly compensation in dollars. Shareholder return is return on equity \* market value in millions of dollars. Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm's number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the director holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

**DIRECTOR PAY-FOR-PERFORMANCE SENSITIVITY - Jensen & Murphy measure**

Variables	Total Compensation			Cash Compensation		
	1	2	3	1	2	3
Shareholder return	-41,2	-40,2	-2,6	-0,3	-1,2 **	-0,3
Shareholder ret. * staggered board	17,9 **	17,9 *	5,1	2,7 ***	3,4 ***	2,6 ***
Board size	33.370,1	30.397,1	13.673,5	-1.251,2 ***	-323,7	-1.217,1 ***
CEO ownership	373.497,1	317.355,2	-323.792,3 **	-17.660,5	-83.778,6	-21.093,1
Person's ownership	-1.296.435,0	-1.376.115,0	-1.602.879,0 *	-90.973,3	-111.334,0	-91.778,9
Blockholder5	446.031,1	405.636,0	-134.493,3	3.160,4	-6.749,0	666,9
Blockholder1	-556.783,8	-520.027,8	318.210,6	11.414,9	-17.281,5	14.359,8
Blockholder05	626.790,0	645.571,0	-57.005,3	-16.787,7	4.857,7	-14.876,9
Blockholder01	62.261,2	35.022,4	13.188,5	358,0	229,6	-13,8
Shareholder ret. * poison pill	26,1	27,2	-14,9	0,3	-1,1	0,1
Shareholder ret. * golden parachute	31,6	29,7	-5,4	0,2	2,1 ***	0,4
Shareholder ret. * confidential voting	11,5	11,3	-6,6	-0,6 **	-1,1 *	-0,6 **
Sahreholder ret. * cumulative voting	-18,3	-15,2	4,3	0,9	1,1	1,1 *
Shareholder ret. * unequal voting rights	-84,1	-85,0	0,1	0,4	3,4 **	0,4
Shareholder ret. * dual class shares	-95,5	-97,7	25,7	-1,0 *	-6,0 **	-1,0 *
Shareholder ret. * supermajority req.	20,9	22,1	-1,8	-0,7 **	-0,2	-0,7 **
Total assets	-1,1	-1,9	29,1	0,2 ***	0,3	0,1 **
Leverage ratio	177.123,8	168.272,3	-168.182,3	2.321,1	24.160,7 ***	6.392,7
Sales	6,3	6,8	13,5	-0,0	-0,2	0,0
Investment opp.	10.093,5	11.456,6	-4.860,4	287,0	-1.277,1 *	228,2
Duality	33.439,9 **	40.737,3 **	97.182,3 ***	1.648,9	7.401,8 **	2.728,5
Board composition	330.649,1	312.495,7	80.665,1	-8.848,7	2.807,1	-10.111,8
Percentage busy	-4.410,3	-4.575,1	-11.113,8	255,2 ***	201,6 *	239,5 **
Constant	-760.676,5	-696.032,7	-961.155,1	17.053,9 **	-664,9	16.248,0 **
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	0,30%	0,34%	2,34%	0,38%	4,06%	0,70%
N	51.867	51.867	51.867	51.867	51.867	51.867

**Table 16 – Executive pay-for-performance sensitivity (Jensen & Murphy measure)**

The dependent variable is the change in executives' cash and total yearly compensation in dollars.. Shareholder return is return on equity \* market value in millions of dollars. Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm's number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the executive holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

**EXECUTIVE PAY-FOR-PERFORMANCE SENSITIVITY - Jensen & Murphy measure**

Variables	Total Compensation			Cash Compensation		
	1	2	3	1	2	3
Shareholder return	18,5 *	16,4 *	5,3	2,6 ***	2,6 ***	1,1
Shareholder ret. * staggered board	-21,5 ***	-20,9 ***	-19,1 *	16,2 ***	16,4 ***	26,6 ***
Board size	-5.241,3	-1069,5	-2296,9	1370,1 **	734,7	13357,9 ***
CEO ownership	-33.858,3	55057,9	1643034,0 ***	-22806,3	-24560,3	-228761,2 **
Person's ownership	202.880,0	164149,3	155009,2	-28165,9 **	-33585,0 **	-30749,5 **
Blockholder5	-105.992,9	-186531,4 *	-104847,1	131926,2 ***	133046,2 ***	140248,8 ***
Blockholder1	-264.357,8	-250165,4	22239,9	-20580,9	-22125,0	-104247,6 ***
Blockholder05	583.443,7 **	629977,2 ***	556573,6 *	-12314,6	-10364,7	67148,1 ***
Blockholder01	-47.553,8	-108902,1 ***	-98223,5 ***	-13137,0 ***	-15265,8 ***	-16752,3 ***
Shareholder ret. * poison pill	-37,1	-35,9	-49,7 **	-6,4 **	-5,9 *	-5,2
Shareholder ret. * golden parachute	4,6	1,8	-5,7	-0,7	-0,7	4,2 ***
Shareholder ret. * confidential voting	-30,2 **	-28,4 *	5,3	-5,0 ***	-4,9 ***	-10,1 ***
Shareholder ret. * cumulative voting	34,6 **	37,2 ***	57,7 ***	5,8 ***	6,2 ***	4,8
Shareholder ret. * unequal voting rights	-25,7	-24,4	-14,3	-6,4 *	-6,3 *	-4,3
Shareholder ret. * dual class shares	-9,7	-12,0	-83,8	2,6	2,2	-5,5
Shareholder ret. * supermajority req.	-21,7 **	-18,2 *	-5,0	-5,5 ***	-5,1 ***	-8,2 ***
Total assets	5,6 ***	34,0 ***	21,5 ***	0,3 *	0,3 **	0,4
Leverage ratio	120.946,3 *	123724,8 *	199414,7	1432,0	-3843,7	152794,2 ***
Sales	-0,1	1,3	-15,2	-0,1	-0,1	-0,5
Investment opp.	22.030,4 ***	19244,8 ***	17727,1	105,7	37,9	-6011,6 ***
Duality	-204.497,4 ***	-174503,0 ***	-162134,0 ***	2382,6	3561,4	-10270,5 *
Board composition	-515.494,0 ***	-506936,4 ***	-422341,3 ***	-14491,9	-16970,9	96342,9 ***
Percentage busy	943,2	418,7	-3521,9	362,9 **	311,2 **	704,4 ***
Constant	811.603,3 ***	814017,2 ***	672402,5 **	17086,9	27827,7 **	-208855,6 ***
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	0,38%	0,77%	5,21%	1,75%	7,91%	2,01%
N	71.966	71.966	71.966	71.966	71.966	71.966

**Table 17 –Director pay-for-performance sensitivity (Hall & Liebman measure)**

Δ Market value (in %) is the percentual change in market value since previous year. Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm's number of directors. CEO ownership is the percentage of shares that the CEO holds. Person's ownership is the percentage of shares the director holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

Variables	Log Δ Total compensation			Log Δ Cash compensation		
	1	2	3	1	2	3
Δ Market value (in %)	-0,004 ***	-0,001	0,001	0,002 **	-0,001	-0,002 **
Δ Market value (in %)*staggered board	0,003 ***	0,002 ***	0,000	-0,001	0,000	0,000
Board size	-0,004	0,008	0,075 ***	-0,006	-0,011 **	0,061 ***
CEO ownership	-0,469	-0,559 *	-1,315 ***	-1,679 ***	-1,781 ***	-2,578 ***
Person's ownership	3,407	3,267	2,967	3,294 ***	3,073 ***	2,827 ***
Blockholder5	0,115	0,099	0,271 **	0,133 *	0,146 *	0,051
Blockholder1	-0,272 *	-0,378 **	-0,269	-0,363 ***	-0,180	-0,070
Blockholder05	0,305 ***	0,313 ***	0,394 ***	-0,049	0,007	-0,005
Blockholder01	-0,005	0,036	0,094 ***	0,993 ***	0,051 **	-0,010
Δ Market value (in %)*poison pill	-0,005 ***	-0,005 ***	-0,004 ***	0,001	0,002 **	-0,001 *
Δ Market value (in %)*golden parachute	0,005 ***	0,002 ***	0,002 *	-0,002	0,000	0,002 ***
Δ Market value (in %)*confidential voting	0,003 ***	0,002 ***	0,003 ***	0,000	0,000	0,001
Δ Market value (in %)*cumulative voting	0,000	0,000	0,000	0,002	0,003 *	0,003 *
Δ Market value (in %)*unequal voting rights	0,003 *	0,004 **	0,001	0,001	-0,002	-0,003 *
Δ Market value (in %)*dual class shares	0,003 **	0,002	0,000	0,004 ***	0,005 ***	0,005 ***
Δ Market value (in %)*supermajority req.	0,002 ***	0,002 **	0,000	-0,003 ***	-0,002 **	0,000
Total assets	0,000 ***	0,000 ***	0,000 *	0,000 ***	0,000 ***	0,000
Leverage ratio	-0,458 ***	-0,354 ***	-0,437 ***	0,068	0,027	0,098
Sales	0,000	0,000	0,000	0,000	0,000 ***	0,000
Investment opp.	0,010 **	0,017 ***	0,023 **	0,018 ***	0,007	-0,013
Duality	-0,177 ***	-0,239 ***	-0,308 ***	0,384 ***	0,405 ***	0,302 ***
Board composition	-1,257 ***	-1,138 ***	-0,153	-1,138 ***	-1,215 ***	0,011
Percentage busy	0,003 **	0,000	-0,008 ***	0,004 ***	0,004 ***	0,001
Constant	10,719 ***	10,460 ***	9,032 ***	10,097 ***	10,267 ***	8,868 ***
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	2,30%	3,74%	19,81%	4,32%	7,10%	19,97%
N	32399	32399	32395	30241	30241	30241

**Table 18 – Executive pay-for-performance sensitivity (Hall & Liebman measure)**

Δ Market value (in %) is the percentual change in market value since previous year. Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Board size is the firm's number of directors. CEO ownership is the percentage of shares that the CEO holds. Person's ownership is the percentage of shares the director holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Board composition is the amount of outside directors over the total number of directors. Percentage busy is the percentage of directors that is in 3 or more other boards. Total outsiders 69 is the amount of outside directors that is 69 years or older.

**EXECUTIVE PAY-FOR-PERFORMANCE SENSITIVITY - Hall & Liebman measure**

Variables	Log Δ Total compensation			Log Δ Cash compensation		
	1	2	3	1	2	3
Δ Market value (in %)	0,002 ***	0,001 ***	0,002 ***	-0,001 *	0,000	0,000
Δ Market value (in %)*staggered board	0,001 **	0,000	0,000	0,001 ***	0,001 ***	0,000
Board size	0,043 ***	0,055 ***	0,030 ***	0,022 ***	0,025 ***	0,034 ***
CEO ownership	0,092	0,197	-0,427	0,697 ***	0,646 ***	-1,570 ***
Person's ownership	-0,036	-0,053	-0,116 **	-0,606 ***	-0,629 ***	-0,551 ***
Blockholder5	-0,359 ***	-0,318 ***	-0,223 ***	0,312 ***	0,317 ***	0,277 ***
Blockholder1	0,122	0,109	0,444 ***	-0,211 ***	-0,189 **	-0,346 ***
Blockholder05	0,177 ***	0,233 ***	-0,133	0,085	0,120 **	0,293 ***
Blockholder01	-0,095 ***	-0,121 ***	-0,105 ***	0,028 **	0,020 *	-0,011
Δ Market value (in %)*poison pill	-0,003 ***	-0,003 ***	-0,002 ***	0,003 ***	0,002 ***	0,001 ***
Δ Market value (in %)*golden parachute	0,001	0,001 **	0,001	0,000	-0,001	0,000
Δ Market value (in %)*confidential voting	0,000	0,000	-0,002 ***	0,000	0,000	-0,001
Δ Market value (in %)*cumulative voting	0,001 **	0,001	0,002 **	-0,001	-0,001	-0,001 **
Δ Market value (in %)*unequal voting rights	0,004 ***	0,005 ***	0,002 **	0,004 ***	0,004 ***	0,001
Δ Market value (in %)*dual class shares	-0,002 **	-0,002 **	-0,002 **	0,001	0,001	0,000
Δ Market value (in %)*supermajority req.	0,001 *	0,001 *	0,000	-0,001 **	-0,001 **	0,000
Total assets	0,000 ***	0,000 ***	0,000 ***	0,000 ***	0,000 ***	0,000
Leverage ratio	-0,023	0,035	0,285 ***	0,040 *	0,045 *	0,509 ***
Sales	0,000 ***	0,000 ***	0,000 **	0,000 ***	0,000 *	0,000 ***
Investment opp.	0,034 ***	0,023 ***	0,007	0,006 ***	0,005 **	0,006
Duality	-0,278 ***	-0,250 ***	-0,201 ***	-0,125 ***	-0,120 ***	-0,098 ***
Board composition	-0,412 ***	-0,388 ***	-0,197 ***	-0,659 ***	-0,636 ***	-0,307 ***
Percentage busy	0,008 ***	0,007 ***	0,005 ***	0,005 ***	0,004 ***	0,005 ***
Constant	12,838 ***	12,732 ***	12,844 ***	10,675 ***	10,634 ***	10,193 ***
Fixed effects	None	Year, Industry	Year, Firm	None	Year, Industry	Year, Firm
Overall R2	7,24%	8,80%	24,94%	4,40%	5,48%	22,87%
N	47292	47292	47291	60274	60274	60274

### Tables 19, 20 and 21 – regression results period in which vesting is possible, waiting period and total vesting period

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense, 0 otherwise. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes, 0 otherwise. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential, 0 otherwise. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire, 0 otherwise. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes, 0 otherwise. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes, 0 otherwise. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger, 0 otherwise. Rem. Chair independent is a dummy variable equal to 1 if the chairman of the remuneration committee is independent, 0 otherwise. Nom. Chair independent is a dummy variable equal to 1 if the chairman of the nominating committee is independent, 0 otherwise. Board size is the firm's number of directors. Board composition is the amount of outside directors over the total number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the person holds. Percentage busy is the percentage of directors that is in 3 or more other boards. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year, 0 otherwise. Age is the person's age in years. Tenure is the person's tenure in years. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. ROA is return on assets. Sales is the firm's yearly revenue from sales, in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Tobin's Q is market value over book value. Old CEO is a dummy variable equal to 1 if the CEO is 62 or older, 0 otherwise. New CEO is a dummy variable equal to 1 if the CEO is in his/her first year of service, 0 otherwise.

PERIOD IN WHICH VESTING IS POSSIBLE				REQUIRED WAITING PERIOD				TOTAL VESTING PERIOD			
Variable	1	2	3	Variable	1	2	3	Variable	1	2	3
Stagboard	-0,996	-0,330 *	-0,476	Stagboard	-0,159	-0,145	-0,116	Stagboard	0,357	0,143	-0,003
Poison pill	1,026 ***	0,454	0,298	Poison pill	-0,667 ***	-0,418 **	-0,633 ***	Poison pill	-0,182	-0,677 **	-0,473
Golden parachute	-2,640 ***	-2,221 ***	-0,405	Golden parachute	-0,294 *	-0,403 **	0,316	Golden parachute	-1,283 ***	-0,759 ***	0,742 *
Confidential voting	-0,722 ***	-0,705 **	-1,827 ***	Confidential voting	0,272	0,185	-0,002	Confidential voting	0,468 *	0,627 **	0,177
Cumulative voting	0,409	0,258	0,071	Cumulative voting	0,428	0,611 **	0,337	Cumulative voting	-0,329	-0,690	-0,561
Unequal voting rights	-1,848 ***	-0,648	1,071 **	Unequal voting rights	-0,664 *	-0,680 *	0,214	Unequal voting rights	-0,637	0,772	0,817
Dual class shares	2,208 ***	1,912 ***	-1,558 ***	Dual class shares	-0,363	-0,570 *	-0,481	Dual class shares	2,744 ***	3,094 ***	-1,528
Supermajority req.	-0,051	-0,176	0,671 **	Supermajority req.	0,603 ***	0,517 ***	-0,095	Supermajority req.	-0,084	-0,084	0,048
Rem. Chair independent	-2,035 ***	-1,808 ***	0,072	Rem. Chair independent	-0,133	0,016	-0,161	Rem. Chair independent	-1,662 ***	-1,489 ***	-0,582
Nom. Chair independent	-0,973 ***	-0,786 **	0,116	Nom. Chair independent	-1,359 ***	-1,415 ***	-0,588 ***	Nom. Chair independent	0,098	0,285	0,914 **
Board size	-0,111 ***	-0,054	-0,056	Board size	0,028	-0,027	-0,005	Board size	-0,122 ***	-0,061	-0,035
Board composition	-1,403 *	-1,063	0,104	Board composition	2,844 ***	3,826 ***	0,900	Board composition	-2,148 ***	-1,275	-1,659
CEO ownership	2,664	6,765 **	0,957	CEO ownership	8,486 ***	8,727 ***	-0,132	CEO ownership	2,977	5,294 *	2,876
Person ownership	-1,330 *	-1,933 ***	-0,352	Person ownership	-0,493	-0,473	-0,396	Person ownership	-0,358	-0,444	-0,162
Percentage busy	0,031 ***	0,023 **	-0,003	Percentage busy	-0,019 ***	-0,013 *	0,008	Percentage busy	-0,022 **	-0,035 ***	-0,009
Duality	-0,184	-0,311	0,626 ***	Duality	0,453 ***	0,472 ***	-0,445 **	Duality	-0,556 ***	-0,115 ***	0,105
Age	-0,099 ***	-0,083 ***	-0,051 ***	Age	-0,068 ***	-0,074 ***	-0,042 ***	Age	-0,150 ***	-0,115 ***	-0,137 ***
Tenure	0,142 ***	0,130 ***	0,004	Tenure	0,014	0,013	0,015	Tenure	0,050 ***	0,026 *	-0,022
Total Assets	0,000	0,000	0,000	Total Assets	0,000 **	0,000	0,000	Total Assets	0,000 ***	0,000 ***	0,000
ROA	-0,868	-0,115	-0,005	ROA	3,496 ***	3,514 ***	0,378	ROA	3,062 ***	3,284 ***	2,205
Sale	0,000 ***	0,000 ***	0,000 **	Sale	0,000 ***	0,000 **	0,000	Sale	0,000 ***	0,000 ***	0,000
Leverage ratio	0,755	1,807 ***	0,686	Leverage ratio	-1,009 ***	-0,991 **	-1,362 *	Leverage ratio	-1,810 ***	0,834	-0,074
Tobin's Q	0,169 ***	0,177 ***	0,028	Tobin's Q	-0,046 ***	-0,043 ***	-0,003	Tobin's Q	-0,083 ***	-0,086 ***	-0,077 **
Old CEO	0,181	0,055	-0,122	Old CEO	0,166	0,245 *	0,157	Old CEO	0,534 *	0,445	-0,444 *
New CEO	-0,400	-0,200	0,048	New CEO	-0,060	0,030	0,039	New CEO	-0,743 ***	-0,546 *	0,005
Constant	39,025 ***	36,654 ***	32,333 ***	Constant	14,984 ***	15,839 ***	16,225 ***	Constant	45,367 ***	41,192 ***	41,210 ***
Fixed effects	None	Year, Industry	Year, Firm	Fixed effects	None	Year, Industry	Year, Firm	Fixed effects	None	Year, Industry	Year, Firm
Overall R2	5,09%	8,30%	54,80%	Overall R2	2,15%	3,34%	48,07%	Overall R2	1,16%	2,26%	16,80%
N	12761	12761	12736	N	12766	12766	12741	N	32847	32847	32842

Tables 22, 23 and 24 – regression results EPS performance goals thresholds; targets; and maxima (all in dollars, EPS \* shares outstanding)

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger. Rem. Chair independent is a dummy variable equal to 1 if the chairman of the remuneration committee is independent. Nom. Chair independent is a dummy variable equal to 1 if the chairman of the nominating committee is independent. Board size is the firm's number of directors. Board composition is the amount of outside directors over the total number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the person holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. ROA is return on assets. Sale is the firm's yearly revenue from sales, in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year. New CEO is a dummy variable equal to 1 if the CEO is in his/her first year of service.

**EPS RELATED PERFORMANCE GOALS - THRESHOLDS**

Variable	1	2	3
Stagboard	-13,2	-76,9	-656,4 ***
Poison pill	-101,4 **	51,2	-649,1 **
Golden parachute	-1.228,5 ***	-1.506,2 ***	806,6 **
Confidential voting	726,7 ***	894,5 ***	136,6
Cumulative voting	-131,9 **	-247,7 ***	-1.026,1 ***
Unequal voting rights	-644,9 ***	-761,3 ***	415,8 ***
Duall class shares	1.159,0 ***	1.018,8 ***	-258,3
Supermajority req.	-103,9	150,0	155,3 ***
Rem. Chair independent	169,7 **	75,5	-27,7
Nom. Chair independent	-0,4	28,9	11,2
Board size	144,4 ***	136,7 ***	2,5
Board composition	1.019,4 ***	710,5 ***	316,1
CEO ownership	-1.033,8 **	-2.236,8 ***	-964,9
Person ownership	461,7 ***	370,8 **	58,2
Blockholder5	-113,1	-125,0	-102,8
Blockholder1	-462,3	-206,0	-621,3 ***
Blockholder05	508,2	860,0 ***	664,6 ***
Blockholder01	101,8	6,6	57,5
Total Assets	0,1 ***	0,0 ***	0,0 ***
ROA	4.578,7 ***	6.177,8 ***	1.189,5 ***
Sale	0,0 ***	0,0 ***	0,0 ***
Leverage ratio	142,6	947,8 ***	1.968,5 ***
Investment opp.	8,2	-98,5 ***	93,8 ***
Duality	-678,2 ***	-578,1 ***	-53,6
New CEO	-242,1 ***	-280,3 ***	6,5
Constant	-2.208,1 ***	-1.755,0 ***	-1.325,6 **
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	35,18%	38,14%	76,64%
N	9.535	9.535	9.530

**EPS RELATED PERFORMANCE GOALS - TARGETS**

Variable	1	2	3
Stagboard	172,3 ***	107,6 *	32,6
Poison pill	-141,9 ***	11,2	83,6 ***
Golden parachute	-1.383,4 ***	-1.742,3 ***	94,3 ***
Confidential voting	807,9 ***	1.000,2 ***	16,8
Cumulative voting	-98,3	-238,6 ***	-52,7
Unequal voting rights	-719,2 ***	-934,6 ***	418,3 ***
Duall class shares	1.326,1 ***	1.385,5 ***	-479,5 ***
Supermajority req.	-345,2 ***	-73,0 *	15,5
Rem. Chair independent	121,6	56,5	27,5
Nom. Chair independent	-92,3	-165,6 **	-25,3
Board size	150,7 ***	144,9 ***	-21,7 ***
Board composition	1.019,4 ***	678,9 ***	19,9
CEO ownership	-901,1 **	-1.431,3 ***	278,9 **
Person ownership	514,6 ***	298,9 *	1,9
Blockholder5	-62,1	33,0	23,3
Blockholder1	-534,3	-221,1	-638,9 ***
Blockholder05	621,4 *	866,3 ***	612,8 ***
Blockholder01	34,9	-19,2	-81,7 ***
Total Assets	0,1 ***	0,1 ***	0,0 ***
ROA	5.466,1 ***	7.005,8 ***	709,0 ***
Sale	0,0 ***	0,1 ***	0,0 ***
Leverage ratio	1,4	1.075,6 ***	1.105,8 ***
Investment opp.	15,8	-102,7 ***	81,5 ***
Duality	-589,5 ***	-485,5 ***	73,8 ***
New CEO	-185,5 ***	-218,7 ***	-8,3
Constant	-2.296,4 ***	-1.750,2 ***	-199,6
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	47,61%	50,84%	96,90%
N	9.535	9.535	9.530

**EPS RELATED PERFORMANCE GOALS - MAXIMA**

Variable	1	2	3
Stagboard	212,5 ***	104,5	29,4
Poison pill	-163,1 ***	-41,1	103,6 ***
Golden parachute	-1.551,7 ***	-1.968,3 ***	101,3 ***
Confidential voting	835,0 ***	1.068,9 ***	-32,7
Cumulative voting	-134,2 *	-314,7 ***	-31,0
Unequal voting rights	-881,7 ***	-1.067,6 ***	517,0 ***
Duall class shares	1.680,7 ***	1.708,6 ***	-543,6 ***
Supermajority req.	-397,2 ***	-93,2 **	11,3
Rem. Chair independent	176,1 **	115,8	57,5
Nom. Chair independent	-190,8 **	-262,3 ***	-30,1
Board size	159,9 ***	155,9 ***	-19,7 ***
Board composition	983,6 ***	657,9 ***	44,2
CEO ownership	-1.670,9 ***	-2.204,5 ***	371,8 ***
Person ownership	599,4 ***	307,7 *	9,1
Blockholder5	-39,7	68,6	52,5
Blockholder1	-648,7	-287,0	-768,5 ***
Blockholder05	684,5 *	958,0 ***	707,1 ***
Blockholder01	58,8	-0,7	-102,3 ***
Total Assets	0,1 ***	0,1 ***	0,0 ***
ROA	6.221,1 ***	7.576,4 ***	830,9 ***
Sale	0,1 ***	0,1 ***	0,1 ***
Leverage ratio	-91,9	1.142,4 ***	1.191,5 ***
Investment opp.	13,1	-113,3 ***	79,8 ***
Duality	-648,4 ***	-525,2 ***	51,5 *
New CEO	-208,3 ***	-230,5 ***	-21,5
Constant	-2.310,3 ***	-1.716,9 ***	-181,9
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	50,10%	53,58%	96,85%
N	9.535	9.535	9.530

Table 25, 26 and 27 – regression results  $\Delta$  EPS perf. goals targets – ind. avg. (in dollars, EPS \* shares outstanding); ex post; cum. perf. goals

Staggered board is a dummy variable equal to 1 if the firm has a staggered board in that year, 0 otherwise. Poison pill is a dummy variable equal to 1 if the firm can use a poison pill defense. Golden parachute is a dummy variable equal to 1 if the firm has executives that obtain a golden parachute when corporate control changes. Confidential voting is a dummy variable equal to 1 if the shareholders' vote is confidential. Cumulative voting is a dummy variable equal to 1 if shareholders can distribute their votes to their desire. Unequal voting rights is a dummy variable equal to 1 if the firm's voting rights and cash flow rights are differently distributed across share classes. Dual class shares is a dummy variable equal to 1 if the firm has different voting weights assigned to different common stock classes. Supermajority req. is a dummy variable equal to 1 if the firm required more than 51% of votes to approve a merger. Rem. Chair independent is a dummy variable equal to 1 if the chairman of the remuneration committee is independent. Nom. Chair independent is a dummy variable equal to 1 if the chairman of the nominating committee is independent. Board size is the firm's number of directors. Board composition is the amount of outside directors over the total number of directors. CEO ownership is the percentage of shares that the CEO holds. Persons's ownership is the percentage of shares the person holds. Blockholder5 is a dummy variable equal to 1 if the firm has a blockholder that holds 5% or more of the shares. Blockholder1 is a dummy variable equal to 1 if the firm has a blockholder that holds 1% or more of the shares. Blockholder05 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,5% or more of the shares. Blockholder01 is a dummy variable equal to 1 if the firm has a blockholder that holds 0,1% or more of the shares. Total assets is value of all the firm's assets on the balance sheet in millions of dollars. ROA is return on assets. Sale is the firm's yearly revenue from sales, in millions of dollars. Leverage ratio is total debt as reported on the balance sheet over total assets. Investment opp. is the rolling average of the firm's market-to-book ratio of the past 5 years. Duality is a dummy variable equal to 1 if the firm's CEO is also the chairman of the board in that year. New CEO is a dummy variable equal to 1 if the CEO is in his/her first year of service.

**$\Delta$  EPS PERF. GOALS - INDUSTRY AVG. EPS**

Variable	1	2	3
Stagboard	68,1	97,0	-89,1 **
Poison pill	-107,7 **	-24,2	1,7
Golden parachute	-1824,5 ***	-1726,8 ***	45,6
Confidential voting	1009,7 ***	979,9 ***	-170,6
Cumulative voting	-47,3	-253,2 ***	104,3
Unequal voting rights	-861,3 ***	-1402,5 ***	88,2
Dual class shares	1188,2 ***	1880,9 ***	-151,6
Supermajority req.	-211,3 ***	-79,2 *	-62,2 *
Rem. Chair independent	32,8	94,6	19,7
Nom. Chair independent	-100,6	-152,3 **	-117,1 ***
Board size	146,1 ***	147,3 ***	-37,5 ***
Board composition	1274,7 ***	373,1 *	-440,5 ***
CEO ownership	-3026,5 ***	-1782,7 ***	-126,1
Person ownership	572,6 ***	436,2 ***	-3,2
Blockholder5	-133,3	84,2	196,4 **
Blockholder1	-134,0	-117,8	-585,7 ***
Blockholder05	702,6 **	675,3 **	426,4 ***
Blockholder01	-11,7	-34,7	-85,9 ***
Total Assets	0,0 ***	0,1 ***	0,0 ***
ROA	4339,0 ***	6216,6 ***	823,1 ***
Sale	0,0 ***	0,0 ***	-0,0
Leverage ratio	-273,5	956,4 ***	786,5 ***
Investment opp.	14,4	-86,6 ***	127,6 ***
Duality	-362,4 ***	-463,8 ***	181,1 ***
New CEO	-150,0 **	-148,5 **	82,8 ***
Constant	-2519,8 ***	-2521,3 ***	-314,4
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	35,83%	41,77%	94,63%
N	9.535	9.535	9.530

**EPS RELATED PERFORMANCE GOALS - EX POST MEASURE**

Variable	1	2	3
Stagboard	0,000	-0,022 **	-0,077 ***
Poison pill	-0,015	-0,046 ***	-0,069 ***
Golden parachute	0,003	0,066 ***	0,140 ***
Confidential voting	0,009	0,012	-0,193 ***
Cumulative voting	-0,011	-0,029	-0,023
Unequal voting rights	0,046	0,035	0,084 **
Dual class shares	0,027	0,087 ***	0,499 ***
Supermajority req.	-0,026 ***	-0,013	-0,049 ***
Rem. Chair independent	-0,099 ***	-0,101 ***	-0,138 ***
Nom. Chair independent	0,006	0,010	0,055 ***
Board size	0,020 ***	0,021 ***	0,020 ***
Board composition	0,347 ***	0,316 ***	0,388 ***
CEO ownership	-0,674 ***	-0,585 ***	-0,313
Person ownership	0,036	0,033	-0,010
Blockholder5	-0,076 ***	-0,061 **	0,002
Blockholder1	-0,044	-0,017	-0,081
Blockholder05	0,017	0,008	-0,037
Blockholder01	0,046 ***	0,048 ***	0,068 ***
Total Assets	0,000 ***	0,000 ***	0,000 ***
ROA	-0,265 ***	-0,483 ***	1,170 ***
Sale	0,000 **	0,000	0,000
Leverage ratio	0,110 ***	0,179 ***	0,257 ***
Investment opp.	-0,006 ***	-0,004	-0,014 ***
Duality	-0,054 ***	-0,066 ***	-0,020
New CEO	-0,030 **	-0,039 ***	-0,050 ***
Constant	0,139 ***	0,103 **	-0,359 ***
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	3,95%	8,51%	33,27%
N	14.858	14.858	14.855

**NUMBER OF CUMULATIVE ABSOLUTE PERFORMANCE GOALS**

Variable	1	2	3
Stagboard	0,103 ***	0,119 ***	0,034
Poison pill	-0,031	0,196 ***	0,155 ***
Golden parachute	-0,137 ***	-0,188 ***	0,023
Confidential voting	0,141 ***	0,206 ***	-0,127
Cumulative voting	0,144 **	0,165 ***	0,021
Unequal voting rights	0,188 **	0,114	0,360 ***
Dual class shares	-0,178 ***	0,091	-0,220 **
Supermajority req.	-0,166 ***	-0,016	-0,245 ***
Rem. Chair independent	-0,077 *	-0,151 ***	-0,059
Nom. Chair independent	0,164 ***	0,027	-0,008
Board size	0,000	-0,007	0,013
Board composition	0,237 **	0,505 ***	0,375 ***
CEO ownership	-3,351 ***	-3,368 ***	-2,866 ***
Person ownership	0,116	0,147	0,125
Blockholder5	0,366 ***	0,357 ***	0,216 *
Blockholder1	-0,419 ***	-0,147	0,011
Blockholder05	0,201 *	0,278 **	0,266 ***
Blockholder01	0,142 ***	-0,052 **	-0,008
Total Assets	0,000 ***	0,000 ***	0,000 ***
ROA	-0,769 ***	0,109	0,620 ***
Sale	0,000 ***	0,000 ***	0,000 ***
Leverage ratio	-0,127	-0,241 ***	-0,678 ***
Investment opp.	0,031 ***	-0,014 *	-0,054 ***
Duality	0,158 ***	0,239 ***	-0,062 *
New CEO	0,287 ***	0,291 ***	0,128 ***
Constant	1,594 ***	1,719 ***	1,972 ***
Fixed effects	None	Year, Industry	Year, Firm
Overall R2	1,87%	7,07%	46,72%
N	18.967	18.967	18.962



Lastly, table 27 provides the regression results of the amount of performance goals that have to be cumulatively achieved to obtain a reward. The staggered board variable is significant in regressions 1 and 2. The positive coefficient 0,103 shows that options rewarded by firms with a staggered board have on average 0,103 more performance goals that have to be achieved to obtain the reward linked to the performance goals. This is not in line with the skimming hypothesis.

Reflecting on existing studies regarding managerial entrenchment and performance hurdle conditions (Bettis et al. (2010), Qu et al. (2018)), the results partly align. The higher target and maximum levels of performance diverge from previously found results, and so do the results regarding the higher amount of cumulatively performance goals required for payout. The rest of the results are to be similar to the studies mentioned.

Although it varies whether the results to test the fourth hypothesis are in line with those hypothesized by the skimming hypothesis, there is sufficient evidence that the performance hurdle conditions of options given out differ between firms with staggered and unitary boards. The fourth hypothesis can therefore be rejected.

## *5.2 Limitations*

The data is limited to listed firms from the United States between the years 2007 and 2019. All industries from the Fama French 12 industry classification are represented, but some occur more often in the dataset than others. A firm specific distribution of industries can be found in the appendix, together with a distribution of the entire Compustat database to compare. The representativeness of the sample with regards to other key variables, such as firm size and staggered board appearance is not analyzed. Furthermore, the potential effect that the COVID crisis had on the managerial compensation is not considered in the studies. Continuingly, the quality of the IncentiveLab data, on which a large part of the analysis is built, is of limited quality. Many observations are useless due to unrealistic large or negative values. Some variables had to be pruned in order to be useful for the analysis (total assets; sales; investment opportunity; market-to-book ratio; EPS goal threshold, target and maximum levels). Also, since the IncentiveLab database did not contain any values for the Age variable and did not contain Tenure as a variable at all, values for these variables had to be taken from other sources, leading to different data sources for executives and directors with regards to these variables. This might cause discrepancies due to reporting differences. The fact that the ISS Directors dataset is the only dataset that doesn't use fiscal years might cause unintended results as well. Lastly, with regard to the performance goals, the exclusion of relative and accelerated performance goals leads to an omission of a significant part of performance hurdles used in compensation schemes. This must be taken into account when interpreting the results of hypothesis 4.

Regarding the methodology, a large drawback of the analysis lies in the applicability of the (control) variables for directorial compensation. Due to the limited amount of research on directors' payments

and the large pile of studies on executives', control variables used are all derived from studies on executive compensation. It could be that directors' compensation is affected by omitted variables. Furthermore, for the second hypothesis, two different measures are used for assessing pay-for-performance sensitivity. Although these measures are the most commonly used in related literature, other measures exist as well. Inclusion of these measures would improve the completeness of testing the second hypothesis further, but this goes beyond the scope of this study. For the third hypothesis, only time-related vesting conditions are considered, not the face value of options granted and the difference between the face value and the current stock prices. These measures would accordingly give a more complete overview of the effect of staggered boards on vesting conditions, but are omitted from this study as they go beyond the scope. Lastly, for the fourth hypothesis, the measures of difficulty to achieve performance goals has some sidenotes. As EPS is multiplied by the amount of common shares outstanding, the total earnings is measured, instead of EPS itself. Comparing the performance hurdles with industry averages requires a control for industry average firm size and profitability, which is not accounted for. Also, the ex post measure shows whether the target was achieved or not ex post, but not due to what reason. Occasional setbacks (lawsuits, market drawbacks, crises, etc.) might cause the performance goal not to be achieved, regardless of the performance of the management. This must be considered in the interpretation of this measure.

## **6. Summary and conclusion**

This study explores the effect staggered boards on managerial compensation, a rather understudied topic compared to the effect on firm value. Some research has been done on the level and composition of executive compensation, but the impact on directorial compensation, vesting conditions of options granted or performance goals related to compensation schemes have never been studied. This paper sheds a first light on these topics.

To summarize briefly, I test four null hypotheses in this paper to find out whether a staggered board affects the level of managerial compensation, the performance sensitivity of these compensation schemes, the vesting conditions of options granted and the performance conditions related to these schemes. My hypotheses are formulated in accordance with Bertrand & Mullainathan's (1998) 'skimming model', suggesting that staggered boards give executives more job security and accordingly puts executives in the position to 'skim' more value from the firm at the expense of shareholders. Their model argues that antitakeover provisions shift some control of the firm from shareholders towards executives. In this line of argumentation, I hypothesized that staggered boards lead to higher overall managerial compensation that is less performance-sensitive. Also, I hypothesized that firms with a staggered board would give out options that were easier to vest and that the performance goals linked to grants would be easier to achieve.

My findings are partly aligned with these expectations. Staggered boards seem to decrease both director and executive compensation. Regarding the performance sensitivity of the managerial compensation, there seems to be a negative relation with staggered boards, although the results are not unanimous. The vesting conditions of the options granted differ hardly between firms with and without staggered boards. Lastly, firms with staggered boards set performance goals with lower thresholds and higher targets and maxima. These goals seem to be easier to achieve for options from firms with a staggered board. There are only marginal differences in the amount of cumulative performance goals required to obtain a grant between firms with and without staggered boards.

This research has explored some new areas of managerial compensation on which the presence of a staggered board has impact. Since little previous literature on many of these areas exists and some interesting relations have been found, further research on these topics would be a valuable addition to the academic field.

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# Appendix

## Correlation matrix

Variables	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28				
(1) stagboard	1.000																															
(2) at	-0.249*	1.000																														
(3) debt_at	-0.099*	-0.008*	1.000																													
(4) ROA	0.033*	-0.205*	0.100*	1.000																												
(5) sale	-0.205*	0.679*	0.006*	-0.028*	1.000																											
(6) investmetopp	0.026*	-0.150*	0.147*	0.425*	-0.030*	1.000																										
(7) duality	0.028*	0.165*	-0.003	-0.022*	0.138*	-0.021*	1.000																									
(8) numberofdirect-s	-0.184*	0.460*	0.088*	-0.153*	0.301*	-0.074*	0.242*	1.000																								
(9) remchairindep	-0.013*	0.002	0.032*	-0.004	-0.008*	-0.020*	0.010*	-0.002	1.000																							
(10) nomchairindep	-0.042*	0.020*	0.052*	0.006*	0.026*	-0.003	0.009*	0.030*	0.235*	1.000																						
(11) boardcomposit-n	-0.005*	-0.064*	0.043*	0.015*	-0.029*	-0.009*	-0.129*	-0.309*	0.205*	0.236*	1.000																					
(12) percentageown-c	0.041*	-0.071*	0.001	-0.005*	-0.056*	-0.005*	-0.004	-0.069*	0.004	-0.009*	0.008*	1.000																				
(13) blockholder5	-0.018*	-0.003	0.010*	-0.014*	-0.009*	0.011*	-0.002	0.014*	-0.012*	-0.034*	-0.051*	0.001	1.000																			
(14) blockholder1	-0.026*	0.036*	-0.020*	-0.036*	-0.003	-0.045*	0.027*	0.039*	-0.035*	0.009*	-0.047*	0.004	0.314*	1.000																		
(15) blockholder05	-0.055*	0.036*	-0.001	-0.043*	0.014*	-0.049*	0.002	0.057*	-0.053*	-0.044*	-0.102*	-0.001	0.197*	0.654*	1.000																	
(16) blockholder01	0.042*	-0.211*	0.078*	-0.031*	-0.181*	0.045*	-0.095*	-0.122*	-0.011*	-0.043*	-0.040*	0.032*	-0.048*	0.114*	0.174*	1.000																
(17) percentagebusy	0.000	0.116*	0.031*	-0.027*	0.131*	0.060*	0.032*	0.031*	0.005*	0.040*	0.139*	-0.010*	-0.005*	-0.039*	-0.036*	-0.047*	1.000															
(18) totaloutsiders	-0.178*	0.404*	0.119*	-0.131*	0.275*	-0.078*	0.174*	0.747*	0.131*	0.186*	0.372*	-0.063*	-0.025*	0.001	-0.025*	-0.152*	0.127*	1.000														
(19) oldceo	0.005*	0.049*	-0.002	-0.047*	0.039*	-0.085*	0.122*	0.048*	-0.024*	0.016*	-0.070*	0.032*	-0.009*	-0.006*	0.025*	-0.041*	-0.005*	0.003	1.000													
(20) newceo	-0.018*	0.019*	0.012*	-0.016*	0.017*	-0.021*	-0.159*	0.046*	-0.026*	0.003	-0.025*	-0.024*	0.002	-0.003	0.005*	0.001	0.007*	0.028*	-0.090*	1.000												
(21) blankcheck	0.043*	0.033*	0.011*	-0.024*	0.014*	0.033*	0.001	0.019*	-0.008*	-0.038*	0.016*	0.002	-0.018*	-0.031*	0.010*	0.056*	0.033*	0.002	0.020*	0.002*	1.000											
(22) confvote	-0.127*	0.267*	0.090*	-0.017*	0.230*	0.002	0.107*	0.193*	0.008*	0.036*	0.031*	-0.038*	-0.017*	-0.039*	-0.015*	-0.139*	0.082*	0.217*	0.034*	0.023*	0.029*	1.000										
(23) cumvote	-0.018*	-0.047*	-0.038*	-0.034*	-0.046*	-0.063*	0.008*	-0.035*	0.013*	0.012*	0.020*	-0.001	-0.008*	0.037*	0.004	-0.044*	-0.006*	-0.023*	-0.005*	-0.015*	-0.026*	0.023*	1.000									
(24) unecqvote	-0.044*	0.041*	-0.031*	-0.010*	0.036*	0.021*	-0.057*	0.062*	-0.042*	-0.136*	-0.129*	0.003	0.098*	0.027*	0.194*	0.039*	-0.045*	-0.033*	0.019*	-0.006*	-0.049*	-0.058*	-0.046*	1.000								
(25) dualclass	-0.018*	0.009*	-0.055*	-0.001	0.018*	0.016*	-0.057*	0.051*	-0.046*	-0.164*	-0.169*	0.007*	0.172*	0.051*	0.237*	0.056*	-0.043*	-0.070*	0.016*	-0.019*	-0.058*	-0.065*	-0.042*	0.721*	1.000							
(26) gparachute	0.024*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
(27) ppill	0.160*	-0.095*	-0.024*	0.020*	-0.084*	-0.009*	0.025*	-0.088*	-0.024*	-0.045*	-0.011*	0.017*	0.005*	-0.005*	-0.006*	0.013*	0.002	-0.095*	0.011*	-0.003	0.021*	-0.028*	0.038*	-0.049*	-0.045*	-0.051*	1.000					
(28) supermajor	0.186*	-0.093*	-0.045*	-0.005*	-0.085*	-0.057*	0.120*	0.062*	0.009*	-0.011*	-0.018*	0.007*	0.020*	0.026*	0.026*	-0.046*	-0.024*	0.053*	-0.015*	-0.022*	-0.055*	-0.058*	0.066*	-0.026*	-0.019*	-0.023*	0.065*	1.000				
	(0.000)	(0.000)	(0.000)	(0.034)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

*Sample industry representativeness*

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FF 12 industry classification	2007				2019			
	Sample	%	Compustat	%	Sample	%	Compustat	%
1	26	7,05%	364	3,35%	37	6,42%	216	2,02%
2	6	1,63%	183	1,68%	18	3,13%	137	1,28%
3	51	13,82%	626	5,76%	73	12,67%	397	3,70%
4	17	4,61%	542	4,99%	26	4,51%	337	3,14%
5	16	4,34%	197	1,81%	24	4,17%	143	1,33%
6	72	19,51%	1537	14,14%	110	19,10%	1056	9,85%
7	1	0,27%	282	2,59%	12	2,08%	151	1,41%
8	25	6,78%	325	2,99%	39	6,77%	261	2,44%
9	49	13,28%	650	5,98%	41	7,12%	382	3,56%
10	30	8,13%	1023	9,41%	52	9,03%	1374	12,82%
11	29	7,86%	3270	30,09%	59	10,24%	4674	43,61%
12	47	12,74%	1870	17,20%	85	14,76%	1589	14,83%
Total observations (N)	<b>369</b>		<b>10.869</b>		<b>576</b>		<b>10.717</b>	