Why do Managers Dismantle Staggered Boards?

Mira Ganor
University of California, Berkeley
Why do Managers Dismantle Staggered Boards?

Mira Ganor*
University of California, Berkeley – School of Law

Staggered boards offer incumbent management considerable protection from hostile takeovers and proxy fights. However, in the last few years, managers of an increasing number of firms have voluntarily destagged their boards, exposing themselves to the risk of being removed from office. This paper investigates why managers decide to destagge their boards. I find statistically significant evidence that the likelihood of destagging increases with shareholder pressure (in the form of precatory shareholder resolutions seeking destagged boards) and with the amount of the CEO’s unvested (including out-of-the-money) options. I do not find evidence of a strong connection between the decision to destagge and firm performance, or other CEO characteristics, including other forms of compensation such as unrestricted equity. The study provides insight into the informal power and influence of shareholders over the board, and the role of equity and monetary compensation in aligning management’s interests with those of the shareholders.

1. Introduction

Staggered boards, also known as classified boards, are boards in which only part of the directors are elected in each annual shareholder meeting. Directors of staggered boards are divided into classes, usually three, and in each annual meeting only one class of directors is elected, usually for a three year term. Thus, replacing the majority of the

---

* JSD Candidate, U. C. Berkeley (Boalt Hall). Email: mganor@boalthall.berkeley.edu

I am indebted to Jesse Fried for invaluable discussions and comments. I would also like to thank Amir Barnea, Lucian Bebchuk, Bernard Black, Brian Broughman, Donna Hitscherich, Eric Talley, participants in the Research in Corporate and Bankruptcy Law Seminar at Boalt Hall, and participants in the Annual Conference on Empirical Legal Studies at Austin Texas (CELS 2006). I gratefully acknowledge funding support from the Berkeley Center of Law Business and the Economy (BCLBE).

---

1 State corporation laws impose varied restrictions on board structure. For example, under California law a board with fewer than 9 directors can be divided into only 2 classes, see CAL. CORP. CODE § 301(5)(b) (2006). Under Delaware law, there is no minimum number of directors required for a board to be divided into 3 classes. Under both California and Delaware law, there can be no more than 3 classes of directors, see CAL. CORP. CODE § 301(5)(a) (2006) and DEL. CODE ANN. tit. 8, § 141(d) (2005); the longest term a director on a staggered board may serve is 3
board requires winning the elections in at least two separate annual meetings. Gaining
control of the board is therefore a cumbersome process (see, e.g., Bebchuk, Coates, and
Subramanian, 2002), consequently, staggered boards entrench the managers in their
office (see, e.g., Bebchuk and Cohen, 2005). Since charter provisions usually establish
the staggered board, the shareholders cannot eliminate it without the directors’
approval.3

The majority of U.S. publicly traded companies have charter based staggered
boards (see Bebchuk, Coates, and Subramanian, 2002). Empirical literature studied the
effect of staggered boards on firm value. Bebchuk and Cohen (2005), and Faleye (2005)
found that market value of companies with staggered boards is lower than that of
companies that did not have staggered boards. Prior studies have found that a staggered
board almost doubles the probability that a target company will remain independent, and
on average a staggered board reduces returns to shareholders of hostile-bid targets (see
Bebchuk, Coates, and Subramanian, 2002). Faleye (2005) also found that companies with
staggered boards have a lower probability of CEO turnover, and both CEO compensation
and CEO turnover are less sensitive to the performance of the company.

In the absence of an official power to dismantle staggered boards unilaterally,
shareholders seeking to destagger the board use precatory (non-binding) resolutions to
ask the board to establish annual elections of all directors. Such shareholder resolutions
are passed pursuant to Rule 14a-8 of the Securities and Exchange Commission
promulgated under the Securities Exchange Act of 1934 which governs the inclusion of
shareholder proposals in the company’s proxy materials. Bebchuk (2005) found that more
than two-thirds of precatory resolutions calling for the repeal of the staggered board that
were passed in 1997-2003 were not implemented by the fall of 2004. Nevertheless, Cotter
and Thomas (2005) found that more shareholder proposals to repeal staggered boards

years. The maximum number of classes under New York law is 4, see N.Y. BUS. CORP. § 704 (a)
(2006). Under New Jersey law, the maximum term of each class of directors is 5 years, see N.J.

2 Bebchuk and Cohen (2005) report that about 90% of staggered boards are charter based.

3 Bebchuk, Coates, and Subramanian (2002) note that in all states, non-minor changes to the
provisions of the charter, such as repealing a staggered board, require the approval of both the
board and the shareholders; and see, e.g., DEL. CODE ANN. tit. 8, § 242(b)(1)-(2) (2005).
received the support of the majority of the shareholders in 2002-04 in comparison to the 1990s.

In the last few years, however, a small but growing number of firms have voluntarily destaggered, some in apparent response to shareholder resolutions, and some not. While there were only three management proposals to repeal the staggered board in 2001 (see Bebchuk, 2005), 35 management proposals to repeal the staggered board were favorably presented by management at shareholder meetings of U.S. public companies in 2004.4 In 2005, 30 similar management proposals were brought to the shareholders’ vote.5 Less than half of these companies had one or more shareholder resolutions asking to destagger in the five year period before the management decided to dismantle the staggered board.

The existing literature does not offer any explanation why managers would volunteer to destagger the board.6 This managerial behavior may seem irrational at first glance, since it increases managers’ risk of being replaced. This paper sets out to explore the motivation for this behavior. The goal of this work is to find out why managers choose to dismantle staggered boards.

I analyzed data on companies that recently changed their boards from staggered to annually elected boards. I find evidence that two forces influence the managers’ decision to destagger: (i) shareholder pressure, as measured by precatory resolutions, and (ii) the CEO’s unvested7 including out-of-the-money8 stock options (henceforth UVOs). Both precatory shareholder resolutions and UVOs9 raise the likelihood of destaggering.

---

4 The proxy solicitation firm Georgeson Shareholder reports 37 management proposals to destagger the board in 2004, of which 2 proposals had a board recommendation against the proposal (see 2004 Annual Corporate Governance Review, available at www.georgesonshareholder.com).

5 Georgeson Shareholder reports 32 management proposals to destagger the board in 2005, of which 30 proposals had a board recommendation in favor of the proposal (see 2005 Annual Corporate Governance Review, available at www.georgesonshareholder.com).

6 As this paper was finished and in limited circulation, I was notified of another upcoming work by Re-Jin Guo, Timothy Kruse & Tom Nohel that seems to have some overlap with this paper and also looks at companies that destagger.

7 An unvested equity interest is a restricted right to the equity; the right to the equity is generally conditioned on the CEO staying with the company for a specified period of time. An option, for example, may be unexercisable until it is vested.
I also tested the effects of other characteristics of the manager and of the firm. The tests included variables such as the age and tenure of the CEO, the CEO compensation, equity holdings of the manager, the Entrenchment Index, and the performance of the firm.¹⁰ None of these other variables, however, yielded a statistically significant result.

This study contributes to current discussion on the extent of shareholder power. The different sides of this debate disagree on the proper allocation of power between management and shareholders (See, e.g., Strine, 2006). My study suggests that shareholders are more potent than might appear from a simple study of their formal rights. My finding of a statistically significant connection between precatory resolutions and the management’s decision to destagger shows that the shareholders may have an informal ability to reshape the board structure. To be sure, this power to influence the board is limited in comparison to formal control rights. Indeed the majority of companies with precatory resolutions do not rush to destagger (see Bebchuk, 2005). Nonetheless, the shareholders are not completely defenseless.

This study also contributes to the current discussion on the decoupling of management compensation and performance. This discussion emphasizes the need for improving managerial accountability and connecting management compensation and performance (see Bebchuk and Fried, 2005). While I do not find evidence that straight equity compensation helps management to focus on the shareholders’ interests, I do find statistically significant evidence that unvested including out-of-the-money stock options motivate the managers to destagger. This suggests that only certain types of equity help connect the CEO’s compensation with the performance of the company and provide motivation to increase the shareholders’ welfare. This finding highlights the importance

---

⁸ An option is considered to be out-of-the-money when the exercise price is higher than the price of the underlying stock. As long as the option is out-of-the-money, it is not worth exercising and the option may expire and have no value. An option that is out-of-the-money is also referred to as “underwater.”

⁹ It may be noted that Section 403 of the Sarbanes-Oxley Act (SOX) curtails the practice of backdating of option-grants. By restricting backdating, SOX increases, on average, the exercise price of options and thus also increases the likelihood that the option will be out-of-the-money before it is vested.

¹⁰ Appendix A lists all the variables used.
of specifically tailored performance-based compensation to aligning the interests of management and shareholders, and it demonstrates the weakness of straight-equity.

The remainder of the paper proceeds as follows. Part 2 provides a short review of the relevant literature. Part 3 presents the hypotheses that may describe managers’ approach towards destaggering. Part 4 describes the database used and the statistical analysis conducted to test the various hypotheses. The statistically significant results of the tests are described in the last section of this Part. Part 5 checks the market reaction to the decision to destagger. This part begins with a presentation of the possible connection between the managers’ decision to destagger and the market’s anticipated reaction. It proceeds with tests for abnormal returns following management announcements of plans to destagger. Part 6 concludes.

2. Literature Review

The literature on anti-takeover defenses has described the significant role that staggered boards play in entrenching management (See Bebchuk, Coates, and Subramanian, 2005). Staggered boards are believed to offer the most powerful anti-takeover defense a manager can employ (see Daines and Klausner, 2001; and Bebchuk, Coates, and Subramanian, 2005). Empirical studies have found that staggered boards lower the probability of CEO turnover, and the sensitivity of both CEO compensation and CEO turnover to the performance of the company (see Faleye, 2005).

Studies have also found that an effective staggered board almost doubles the probability of a target company (a company that is faced with a hostile bid) to remain independent (see Bebchuk, Coates, and Subramanian, 2004). The studies have further found that staggered boards are associated with reduced returns of target companies’ shareholders in comparison with the proceeds of accepting the hostile bid. In addition, the market value of companies with staggered boards was lower than that of companies that did not have staggered boards (see Bebchuk and Cohen 2005).

Yet, studies show that the majority of large public companies in the U.S. have adopted staggered boards (see Bebchuk, Coates, and Subramanian, 2004). Since usually charter provisions establish these staggered boards, the shareholders are incapable of

11 Bebchuk, Coates, & Subramanian (2004: 56) show that an effective staggered board “reduces target shareholder returns on the order of 8-10% in the nine months after a hostile bid is launched.”
changing, unilaterally, the structure of the board.¹² Not surprisingly, Bebchuk, Coates, and Subramanian (2004) report an increase in the number of shareholder proposals asking the board to repeal staggered boards in recent years.¹³ However, Faleye (2005) found that “classified boards … are less likely to implement shareholder-approved proposals.”

To be sure, a board of directors that strips itself of an entrenchment mechanism, especially a potent one such as the staggered board, turns more vulnerable and may become an easy prey to a raider conducting hostile takeovers. Why would management of certain companies choose to destagger? The repeal of an existing staggered board seems counter to the self-interest of the board,¹⁴ and from an economic perspective looks prima facie as an irrational conduct! What may drive the managers to act in a way that appears to hurt their own interest? I offer several explanations for this puzzle as I proceed and analyze possible hypotheses in the following Part.

3. Hypotheses – Reasons Behind Boards’ Drive to Destagger

In order to understand why some boards choose to destagger, I empirically compared certain characteristics of companies with staggered boards that chose to destagger in 2004 and 2005 with companies that remained staggered during the same period, as described in Part 4 below. The characteristics that I checked fall into two sets of theoretical hypotheses that attempt to explain the motivation of boards that choose to destagger. The following sections describe and analyze these hypotheses.

The first set of the hypotheses, discussed in Section 3.1, focuses on the ability of shareholders to influence the board and the efficacy of precatory resolutions. The second set, analyzed in Section 3.2, looks at factors that affect the CEO’s interests in the structure of the board and in the value of the firm.

¹² Bebchuk, Coates, & Subramanian (2004) note that in all states, non-minor changes to the provisions of the charter, such as repealing a staggered board, require the approval of both the board and the shareholders; see, e.g., DEL. CODE ANN. tit. 8, § 242(b)(1)-(2) (2005).

¹³ See also the Georgeson Shareholder reports, see supra note [4].

¹⁴ Cf. Faleye (2005), suggesting that “managerial self-serving purposes” explain the adoption of staggered boards.
3.1 Shareholder Pressure

Shareholders generally do not control the company and are limited in their ability to decide the fate of their company (see, e.g., Thompson and Smith, 2001; and Bebchuk, 2005). While the shareholders are deprived of a formal right to destagger the board, since such a decision must be approved also by the board itself,15 the shareholders may be able to steer the board in informal ways toward the position they favor. For example, shareholders may use the withholding vote mechanism and the media to pressure the board.16

Refusal by the board to acquiesce to shareholders’ non-binding requests to destagger may be a precursor to further shareholder pressure mechanisms. Thus, there may be a correlation between shareholder pressure in the form of precatory resolutions calling for board destagerring and management decision to destagger.

While shareholders’ precatory resolutions are not binding, they may pressure boards to acquiesce. Board compliance might be motivated by reputational concerns. Refusal to comply, for example, may make it harder to extract higher rents because of media focus on the company’s corporate governance and heightened institutional shareholder scrutiny (see, e.g., Dyck and Zingales, 2002, 2004; and Nguyen-Dang, 2005). Such refusal may also affect the stock price negatively, increasing the company’s cost of finance and directly affecting managers’ personal interests to the extent they own company equity.17 In case the board ignores the shareholders’ request, they may resort to

15 Typically, the staggered structure of the board is established in the company’s charter, as we have seen above. Amendments to such charter provisions require the board’s approval. (See Supra notes 2-3 and accompanying text.)

16 An example of a successful vote withholding tactic that won substantial media coverage is the one that cost Michel Eisner his chairman seat on Disney’s board. Floyd Norris reports in “Corporate Democracy and the Power to Embarrass” (The New York Times, March 4, 2004) that “Mr. Eisner, the chairman and chief executive of Disney, had 43 percent of the votes withheld from him in his re-election as director. [ ] in corporate democracy, where competing candidates almost never get onto ballots for director, it is deemed embarrassing to have even 5 percent of the votes withheld. By that standard, Mr. Eisner suffered a great humiliation and within hours the chastened Disney board voted to replace him as chairman while keeping him as chief executive.”

17 For evidence that the stock price of companies with staggered boards is lower, see Bebchuk and Cohen (2005) and Faleye (2005); see also Part 5 below for discussion and statistical evidence of positive market reaction to the decision to destagger.
withholding vote mechanism.\textsuperscript{18} Fearing the outcome of defiance, a board is likely to be more willing to destagger following a shareholder precatory resolution that asks to repeal the staggered board. Thus, this would suggest a positive correlation between the probability that a company destaggers its board and the existence of a precatory shareholder resolution asking the board to destagger in the last annual meeting.

Shareholders may initially request the board informally to destagger, before bringing the proposal to the annual meeting. If the request is favorably treated, it will not be followed by a precatory resolution and negative media coverage will be prevented.\textsuperscript{19} However, a board that does not comply with the shareholders’ informal request to destagger, knowing that a precatory resolution will follow, may not be concerned with the ramifications that are likely to ensue.\textsuperscript{20} Thus, an alternative and opposite hypothesis to the one presented before will view the precatory shareholder resolution as a sign of the board’s strong conviction against destaggering.

Further, it may be that the board will try to fend off shareholders’ attempt to destagger in the hope that it is motivated only by a passing trend and that interest will wane with time. Persevering shareholders who repeatedly demand to destagger may ultimately influence reluctant boards. The cumulative shareholder requests over the years may cause the board to realize that the refusal to destagger has a lasting effect on the company and consequently decide to destagger. Thus, this would suggest a positive correlation between the probability that a company destaggers its board and the existence of numerous shareholder precatory resolutions asking the board to destagger in the years preceding the last annual meeting.

\textsuperscript{18} See, e.g., Institutional Shareholder Services (ISS), This Week In Governance Transcript Week of Apr. 25-29 (reporting the use of vote withholding as retaliation for management ignoring precatory resolutions asking to destagger the board). See their website at www.issproxy.com/twig/transcripts/April272005.pdf

\textsuperscript{19} In fact, by including such destaggering decisions that were initiated by the shareholders’ informal request with the other destaggering decisions that did not have a prior precatory shareholder resolution, when using the existence of a precatory shareholder resolution as an indicator for shareholder pressure in the regressions, we increase the likelihood of a false negative result in checking the influence of shareholder pressure on managers’ decisions.

\textsuperscript{20} A request to destagger that is brought by a small shareholder may not present a threat to the board. The board may want to try to persuade the shareholders that a staggered board serves the interests of the shareholders better, and may check the response of the majority of the shareholders before deciding to change the structure of the board. Refusal to fulfill the request of a large institutional investor, on the other hand, is more likely to bring bad publicity.
Alternatively, companies that refused to comply with the shareholders’ request to destagger in the past may tend to ignore their shareholders’ requests in the future as well. This is because prior behavior of the board may be an indication of its future reaction to the same appeal by the shareholders. Everything else being equal, a board that felt secure and did not feel compelled to follow its shareholders’ request in the past, when facing the same choice again may be making the same decision – not to be attentive to its shareholders.

However, pressure from shareholders to destagger does not appear to be the only reason why some boards decide to destagger. Some companies did not have any precatory shareholder resolution asking the board to destagger before the board itself brought a proposal to destagger to the shareholders’ vote.

While Cotter and Thomas (2005) find a general increase in “board responsiveness” to shareholder proposals in 2002-03, they report that boards agreed to destagger in only “7.6% of all cases where a majority of shareholders had voted in favor of that proposal.” Of the 34 companies in my sample whose board decided to destagger in 2004-05, only 20 had a prior precatory shareholder resolution asking the board to destagger in the years 1997-2004, as reported by Georgeson Shareholders. And only 7 of the companies destaggered the board following only a single precatory resolution in the year before, rather than multiple consecutive resolutions in past years. Of the 50 companies in my sample that had a precatory shareholder resolution in the prior annual meeting only 15 destaggered.

In fact, the apparent general incompetence of shareholders to pressure management has led to the reevaluation of precatory resolutions. In 2003 the Securities and Exchange Commission proposed new rules that, *inter alia*, would “require companies to include in their proxy materials security holder nominees for election as directors” following a failure to implement “a security holder proposal that receives more than 50% of the votes cast.” This proposal, however, received strong objections by commentators

---

21 See Part 4 for a description of the sample used in the regression tests.

who argued that it may not be in the company’s best interest, and so far the proposal has not been implemented.

Thus, I now turn to explore additional factors that may influence managers in favor of destaggering of the board.

3.2 Agent’s Interests

In the previous Section, I discussed shareholder pressure as a potential explanation for why the manager is obliged to destagger. In this Section, I consider the manager’s own interests in the destaggering act. I put forward factors that help form the manager’s personal position towards destaggering. First, I look at what the manager stands to lose from destaggering. Next, I examine what the manager can personally gain from destaggering the board. The manager’s decision whether or not to destagger may be a tradeoff calculation—a comparison of her expected costs of destaggering with her expected benefits.

3.2.1 Potential Loss – Yearly Compensation Flow

In case the board destaggers, the CEO will face an increased risk of being replaced. If replaced, the CEO will lose future benefits and compensation. High CEO annual benefits increase the CEO’s interest in prolonging the current board structure that helps entrench her position and secures her future payments. The yearly compensation, in the form of wages, bonuses, and equity grants, is an estimate of the future yearly pecuniary compensations that CEOs risk losing following destaggering. Thus, the higher the yearly compensation the greater the CEO’s incentive to entrench and hence the greater the CEO’s incentive to keep the board staggered. This hypothesis, however, should be qualified—if the CEO’s benefit from destaggering is also proportional to her yearly compensation, then changes in the yearly compensation do not affect her decision whether to destagger.

23 Assuming that finding an alternative comparable position in the labor market is difficult once the CEO is replaced.

24 Assuming decreasing marginal utility, the relation between the aggregate compensation and the likelihood of destaggering may be described by a convex function, though.
Alternatively, a manager who receives higher compensation may have more confidence in herself\textsuperscript{25} and thus may perceive a lower risk of being replaced (or not being able to find an alternative employment) once a hostile takeover takes place. If the destaggering decision allows the manager to continue to receive higher compensation, the total expected value from destaggering that she calculates may be positive. This may be the case especially with managers who have higher self esteem and perceive lower risk of actually being replaced.

We can divide managers into two types: those who believe they are good and those who believe they are less good or even bad managers. The bad ones are more susceptible than the better managers to being replaced when not entrenched. And vice versa, because of their quality as managers the better managers face a lower risk of being replaced when they are not protected by anti-takeover mechanisms and entrenchment tactics. As a result, it is cheaper to compensate the better managers for their expected loss of being replaced than to compensate the bad ones.

Thus, managers who perceive themselves as better may agree to destagger and face the added risk of being replaced for less compensation than managers who believe less in their own managerial abilities. This is because the latter need more compensation to offset the expected loss. Voluntary destaggering may also be viewed as a signal by the managers that they believe the risk of being replaced is lower, so they agree to strip off their protection for a low compensation. However, managers who believe that their managerial skills are better will assume the risk of destaggering only if currently they are unable to increase or retain the level of personal benefits extracted from the corporation without destaggering. For example, public-outrage may stop managers from increasing their salaries, and managers may even face shareholders’ demands to decrease their salaries. Otherwise, managers do not benefit from destaggering while they face an increased risk.

A high salary, then, may indicate (1) that it is harder for the manager to increase her salary further because of public scrutiny, and (2) that she believes that she has better skills that justify her high salary. To the extent that this is the case, it may be argued that the higher the CEO’s total yearly compensation the higher the probability of destaggering.

\textsuperscript{25} Cf. Daines, Nair, and Kornhauser (2005) that study the relation between CEO pay and CEO skill.
It has to be noted that a positive correlation between CEO’s compensation and shareholder pressure may exist. Excessive compensation may motivate the shareholders to ask the management to destagger, in order to increase the monitoring of management. Thus, it is possible that managers with higher compensation tend to destagger more than those with lower compensation, because the higher compensation triggers shareholder pressure. It may be that shareholder pressure is responsible for the destaggering decision, rather than a direct causal link between the compensation and the destaggering. Higher yearly-compensation than customary in the market may be subject to scrutiny and be susceptible to pressure. In an attempt to justify the excess payments and to divert the public focus, managers may decide to destagger. The destaggering may be used to justify a continued extraction of higher rents by managers in the future as well. The higher future compensation may also serve as compensation for the added managerial risk of being replaced.

Regardless of the magnitude of the manager’s annual compensation, however, the closer she is to retirement the less interest she may have in entrenching herself in the office. The potential loss from being replaced is smaller with the decrease in the amount of years that the CEO may serve. Thus, relative old-age of the CEO may indicate a shorter remaining managerial life span and a potential decrease in the importance that the manager attributes to her annual salary or the threat of being replaced. Thus, this would suggest a positive correlation between the proximity of the CEO to retirement and the probability of destaggering.

On the other hand, age may play a role in the CEO’s ability to find an alternative employment if she is replaced before retirement. To the extent that younger managers are more likely to find a compatible job once replaced, a negative correlation between the CEO’s age and the probability to destagger may exist.

In addition to the size of the potential cost that the CEO may incur should the company destagger, the expected cost to the CEO is affected by the increase in the probability of CEO replacement. Certain company characteristics may affect the probability of a change in control following the destaggering. Thus, company characteristics, such as its performance, may influence the destaggering decision.

For example, when a company is performing better than the market, e.g. has a higher stock-return than the relevant industry, it may face a lower risk of takeover. This may be because, in such event, it is less lucrative for a raider to obtain control for
generally two reasons: (1) when the stock price is relatively high, it is more expensive to buy the company and requires more funding; and (2) when the company performs well there is less value to be created by improving the operations of the company. Thus, when the company performs better than the market the manager may destagger yet face a relatively low risk of being replaced as long as the company continues to outperform the market.26

3.2.2 Potential Gain – Value of Equity Holdings

Equity holdings may serve to align the interests of the agent-CEO with those of the principal-shareholders. The importance of equity compensation as an incentive that motivates the manager to increase the shareholders’ value rather than her own rents has been debated in the literature (see, e.g., Core, Guay, and Larcker 2003; Ofek and Yermack, 2000; and Bebchuk, Fried, and Walker 2002). Thus, I check the hypothesis that the higher the percentage holdings of the manager, the more she internalizes the benefits of the anticipated increase in the company’s value following destaggering.27

The CEO’s equity holdings help to create an interest in the increase of the company’s value, or at least in the stock price (the perceived market value of the company). Because the market reacts positively to destaggering decisions,28 higher equity holdings may positively affect the CEO’s incentive to destagger. The CEO’s percentage holdings indicate how much of the increase in the company value the CEO will internalize. Similarly, the actual value of the CEO’s equity holdings may motivate the manager to increase the value of the company. The more the CEO’s equity is worth, the

---

26 Similarly, the CEO faces a lower expected cost of destaggering when other anti-takeover mechanisms are in place. A higher Entrenchment Index, defined by Bebchuk, Cohen and Ferrell (2004) to include the 6 salient anti-takeover mechanisms, denotes a low probability of a change in control following destaggering, because of the additional protection. Such low probability implies that the manager faces a lower expected cost of destaggering. Thus, the higher Entrenchment Index may indicate a higher probability that the manager will destagger.

27 Studies that show that companies without staggered boards have higher Tobin Q’s (see e.g., Bebchuk and Cohen, 2005) support the assumption that the stock price will increase as a result of the destaggering. In Part 5, below, I study the effect of board destaggering announcements and find suggestive evidence of positive cumulative abnormal returns.

28 See Part 5 below.
greater the value increase the CEO may enjoy following the destaggering.\textsuperscript{29} This would suggest a positive correlation between the CEO’s equity holdings and the probability of destaggering.

Furthermore, different types of equity compensation vary in the extent of the connection between the value of the compensation and the performance of the company. To be sure, the value of all equity is generally linked to the value of the company. Some types of securities, however, have restrictions and characteristics that strengthen the connection between their value and the manager’s performance. Restrictions on vesting and high exercise prices of options are examples of compensation mechanisms that are aimed at motivating managers by increasing the connection between future performance and compensation.

A regular stock may gain or lose value over a course of time based on the price at which it is traded on the market. As long as the manager holds on to the stock and does not sell it, the volatility in the stock price may not reflect a real loss or gain. An option, on the other hand, is different, because it has an expiration date. If the option is not exercised before it expires, it is worth nothing. An option is considered to be out-of-the-money when the exercise price is higher than the price of the underlying stock. As long as the option is out-of-the-money, it is not worth exercising and the option may expire and have no value. Thus, a manager who has options that are out-of-the-money may have an increased incentive to cause the stock price to rise before the option expires.\textsuperscript{30}

In addition, a vesting restriction subjects the security to a holding period during which the manager has to stay with the company. Should the manager’s employment with the company terminate before the security is vested, i.e. before the vesting period has lapsed, the manager will lose the right to her still unvested security. However, vesting agreements usually include an acceleration provision that is triggered upon a change in control of the company. The acceleration provision provides for the immediate vesting of

\textsuperscript{29} This relationship may be described by a convex function if the manager experiences decreased marginal utility from her equity (see also \textit{supra} note [24]).

\textsuperscript{30} It may be noted that Section 403 of the Sarbanes-Oxley Act (SOX) curtails the practice of backdating of option-grants. By restricting backdating, SOX increases, on average, the exercise price of options and thus also increases the likelihood that the option will be out-of-the-money before it is vested.
unvested securities once a change in control takes place. Immediate vesting may provide an incentive for managers to favor a change in control which staggered boards inhibit.

Assuming the stock price is volatile, if the option is vested; as soon as the option is in the money the manager can exercise it and avoid the risk that the future stock price plunges while the option expires unexercised. Conversely, if the option is unvested, the manager needs to make sure that it will be in the money when it is exercisable and before it expires in the future. Thus, an unvested out-of-the-money option increases the manager’s personal interest in the company’s long run value. Since studies have found that companies without staggered boards have higher stock prices (see Bebchuk and Cohen, 2005; Faleye, 2005), the above may suggest a correlation between the amount of unvested out-of-the-money options that the manager has and her motivation to destagger. Thus, I consider the hypothesis that an increase in the CEO’s unvested equity that is out-of-the-money increases the probability of destaggering.

3.2.3 Cost and Benefit Tradeoff
The previous sections presented hypotheses regarding potential costs and benefits that the manager faces from destaggering. An increase in the perceived cost of destaggering will deter the manager and decrease the likelihood that she will destagger. On the other hand, an increase in the benefit that the manager may expect to enjoy following destaggering may increase the likelihood that she will favor destaggering. The manager may base her decision whether or not to destagger on the relative magnitude of her costs and benefits from destaggering.

Thus, the higher the ratio between the manager’s yearly compensation and her equity, the more likely it is that she will not destagger. And vice-versa, the lower that ratio, the higher the probability that the manager will destagger the board. This suggests a negative correlation between the ratio of CEO’s yearly compensation and her equity holdings and the probability of destaggering.

4. Hypotheses Testing
We now turn to test the characteristics of managers who volunteer to destagger. Using the data described in the following section, I identify two sets of companies: companies with staggered boards that did not destagger, and companies that did destagger their board. Employing probit regression tests, I check several possible explanatory variables to test
the hypotheses presented in the previous Part. In Section 4.1, I describe the data collection method and the sample used for the statistical tests. In Section 4.2, I describe the statistical tests and the results. The key findings of the statistical tests are summarized in Section 4.2.3.

4.1 Data

The sample comprises of a total of 992 observations. It is drawn from a list of 509 companies. Of those companies, 34 had destaggered their boards either in 2004 or 2005. The remaining 475 companies had staggered boards in both years. For the companies that had decided to destagger, I collected data for the years preceding the decision. For each year, I then collected comparable data for companies that did not destagger in the same year, in an attempt to find significant differences.

In Section 4.1.1, I describe the selection process of the companies in the sample. Section 4.1.2 provides an explanation of the data used to derive the observations for the probit regression tests.

4.1.1 Identifying the Companies

Companies with Staggered Boards

I began by identifying companies that had staggered boards in 2003. I used data from the Investor Responsibility Research Center (IRRC) posted on Lucian Bebchuk’s website to compile a list of companies that had staggered boards in 2002 (the IRRC database does not include 2003). Using the Edgar database, I identified companies that had destaggered in 2002 or 2003, and I excluded those companies from the initial list, to obtain a list of companies that had staggered boards throughout 2003.

From the companies that had staggered boards throughout 2003 I further excluded companies that were included in one of four sets of companies with special structures. These special structures, described below, include: (i) Financial trading companies; (ii) Dual class companies; (iii) Companies with CEOs who have significant beneficial ownership; and (iv) Bylaws based staggered boards. The special structure may bias the study of the managers’ motivation to destagger, because it may defuse the key role of the staggered structure.

31 Available at www.law.harvard.edu/faculty/bebchuk/data.htm.
Thus, by looking at the four-digit Standard Industrial Classification Code ("SIC Code") of the companies I identified companies that are categorized as “Financial Trading,” such as real estate financial trusts (REITs), and excluded them from the sample, as they may have a special corporate governance structure (see, Bebchuk and Cohen, 2005; and Daines 2001). Following Bebchuk and Cohen (2005), I further excluded from the list companies with dual class capital structure. This type of structure, rather than the board structure, may be central in entrenching the CEO.

A small amount of companies that are part of the data is characterized by an abnormally high CEO percentage holding (outliers). For example, in one of the companies the CEO has beneficial ownership of more than 50% of the shares. In such cases, the staggered structure of the board is immaterial since the CEO has such extensive power over the company that she does not need the staggered structure to secure her position and her decision to destagger is not puzzling. To learn more about the motivation of CEOs as agents, I leave in the sample only companies with managers’ who have less than 10% beneficial ownership. In this sub-sample, the staggered structure plays a more significant role in the CEO’s entrenchment.32

Further, following Bebchuk, Coates, and Subramanian (2004) I distinguish between weak staggered boards and more restricting staggered boards. If the staggered board provisions are found in the bylaws, rather than the company’s charter, the shareholders might, in theory, be able to change the provisions themselves. Thus, such staggered boards present less of a problem for the shareholders. If companies had only weak staggered boards, then management would not lose much protection when the board is destaggered. Thus, I use the data posted on Lucian Bebchuk’s website (originated from the IRCC data base)33 complemented by a check of SEC filings as reported on Edgar, when needed, to identify the companies in the sample that have only bylaw-based staggered boards.34 I omitted all the companies in the sample that did not have charter-based staggered boards.35

32 Indeed, when companies with 40% and higher CEO beneficial ownership are included in the sample, the explanatory variable that measures the CEO’s percentage holdings comes out significant in the regressions.

33 See supra note [31].

34 Of the companies in the unrestricted sample that destaggered in 2004-05, only 5 had bylaws-based boards.
Companies that Destaggered

Next, I used Georgeson Shareholder’s lists of companies that destaggered in 2004 and 2005 following the board’s recommendation. As with the list of companies with staggered boards, I focus only on those companies that are non-financial companies and do not have a dual class structure. I excluded companies that did not have charter-based staggered boards. Companies of which the CEO had a beneficial ownership of more than 10% were also not included. I also excluded two companies for which the destaggering resolution had been initiated as either part of an investment transaction or a lawsuit settlement.

Among the companies, I identified two companies that have been beneficially owned by the same person. Including both might have introduced correlation in the error and contradicted the basic assumption of nonautocorrelation of the linear regression model. Therefore, to avoid bias in the results, I excluded one of the two companies from the sample. I also do not include another company because it is structured as a trust.

The results of the statistical tests are not substantially different when running with or without the bylaws-based staggered boards. Because the number of observations decreased, however, the significance level of the estimated coefficients did decrease.

Similarly, I also do not include Gartner Inc. which not only destaggered in 2005 but also combined its two classes of stock into one at the same time. This is because these notable dis-entrenching measures fade in light of a block holder of Gartner who not only owns a third of the combined equity capital of the company with regular election rights but also has special contractual rights to appoint two directors.

These companies are National Medical Health Card Systems and Cendant. In the case of National Medical Health Card Systems, the destaggering resolution was brought to the shareholders' vote as a condition to an investment transaction by an acquirer which eventually resulted in a change in control. In Cendant, it seems that the resolution has been influenced by a lawsuit settlement with a shareholder following an accountant scandal from 1998.

These companies are Westcorp and WFS Financial Corp.

It should be noted that there might be some autocorrelation in the sample, because I look at the same staggered companies in 2004 and 2005 for those companies that did not destagger in 2004. The errors of those companies may be correlated. However, since the number of staggered companies is so much larger than the number of destaggered ones, and the possible correlation is only between companies that were staggered in both years, the effect of the autocorrelation, if any, is negligible. Because the number of destaggered companies is relatively very small in comparison to the number of staggered companies, the effect of the latter on the standard deviation of the slope is suppressed. Furthermore, the original study, which was conducted on the...
4.1.2 Explanatory variables

For each individual company on the list described in the previous Section, data that falls into one of the following three categories is gathered: (i) information on precatory shareholder resolutions; (ii) information on the CEO; and (iii) company characteristics which include performance variables and the company’s Entrenchment Index where available. The data derives mainly from the following sources: the Georgeson Shareholder’s annual reports; the ExecuComp database; Compustat database, and the IRRC database. Appendix A provides a concise list of all the types of data that is ultimately used in the regressions as explanatory variables.

Using the Georgeson Shareholder’s annual reports, I extract data about precatory shareholder resolutions calling the company to destagger in the years 1999-2004. I define a binary variable PSR to indicate whether the shareholders passed a precatory resolution to destagger in the annual meeting preceding the board’s decision to destagger. TPSR denotes the number of precatory resolutions that the shareholders had passed in the four years prior to the annual meeting preceding the board’s decision to destagger. WTPSR sums the same shareholder resolutions as TPSR while assigning different weights to each resolution based on the year the resolution was passed. WTPSR assumes that resolutions that are more recent influence the board more than earlier resolutions, and thus assigns larger weights to more recent precatory resolutions.

To check the hypotheses presented in Part 3, in addition to collecting data about precatory shareholder resolutions, for each company in the list described in the previous limited 2004 sample, before the 2005 data were available, provided similar statistically significant results.

---

40 This company is First Union Real Estate.

41 I used data reported on Lucian Bebchuk’s website to retrieve data about the corporate governance arrangements of the companies that originated from the IRRC governance database. See supra note [31].

42 For 2004 data, PSR is a binary variable indicating whether or not the shareholders passed a precatory resolution in 2003, and TPSR is the number of precatory resolutions calling for destaggering during 1999-2002. Similarly, for 2005, PSR indicates whether there was a precatory resolution in 2004, and TPSR is the sum of such resolutions during 2000-03.

43 The weights, assigned arbitrarily, are: 40% to the most recent resolution, 30% to the previous resolution, 20% and 10% to the earlier resolutions, respectively.
Section, I extracted data on the CEO for the years 2003-04 using the ExecuComp database. I look at the following characteristics of the companies: (1) the total compensation of the CEO in the year before the destaggering (denoted by TDC);\textsuperscript{44} (2) the percentage of the CEO’s equity ownership in the company;\textsuperscript{45} (3) the value and composition the CEO’s equity holdings (e.g., the worth of the securities as well as the amount of restricted shares and unvested options including out-of-the-money options);\textsuperscript{46} (4) the tenure\textsuperscript{47} of the manager as CEO;\textsuperscript{48} and (5) the CEO’s age as of the beginning of the year of the destaggering.\textsuperscript{49} Where ExecuComp does not provide sufficient information about a company, I either complemented the database with missing information found on Edgar filings and other sources available on LexisNexis (such as Forbes’ information on CEOs, Standard & Poor’s Register of Directors and Executives, 

\textsuperscript{44} The total yearly compensation is denoted by ExecuComp by TDC1. It includes: Salary, Bonus, Other Annual, Total Value of Restricted Stock Granted, Total Value of Stock Options Granted (using Black-Scholes), Long-Term Incentive Payouts, and All Other Total. (See ExecuComp’s Data Definitions.)

\textsuperscript{45} I used ExecuComp’s SHROWNPC, which is the percentage reported by the company in the proxy statement adjusted for options. Since companies are not required to disclose less than 1% ownership, ExecuComp’s SHROWNPC reports blanks when the percentage is not reported and is below 1%. Because this omission may bias the statistical results, I also calculated the CEO’s percentage holding by dividing ExecuComp’s SHROWN (shares owned) and SHROUT (total shares outstanding), adjusting for options. This quotient is a close estimator for the real percentage holding, since SHROUT is the number of shares as of the end of the fiscal year, while SHROWN is as of a date closer to the proxy date. I obtain similar results when using either of these variables.

\textsuperscript{46} In addition to the value of shares owned by the CEO, I include the following variables from ExecuComp: RSTKHLD; RSTKHLDV; UEXNUMEX; UEXNUMUN; INMONUN; and INMONEX. For a description of these variables, see Appendix A.

\textsuperscript{47} The tenure of the manager along with her equity may indicate her control of the board and ability to resist shareholder pressure, similarly to Malcolm Baker and Paul A. Gompers (2003) who look at the manager’s tenure and percentage holdings as an estimate for her bargaining power upon IPO of venture-capital backed companies. To be sure, the outside director herself may have a personal interest in maintaining the board’s staggered structure, to the extent that it may help entrench also her seat on the board. Such correlation between a staggered structure of the board and directors’ tenure, however, was not found. Faleye (2005) reports that “electing directors to staggered terms has no significant effect on board turnover.”

\textsuperscript{48} I used the date the executive became CEO, as reported by ExecuComp, to calculate the CEO’s tenure as of the beginning of 2004 or 2005, as applicable.

\textsuperscript{49} ExecuComp database shows the age of the executive (denoted by P_AGE_2) as of the date of the most recent filings reported on the database. I calculated the CEO’s age as of January 2004 or 2005.
and D&B's Hoover's Company Records), or I excluded the company altogether from the database. I also include, as an explanatory variable, Bebchuk, Cohen and Ferrell’s Entrenchment Index\textsuperscript{50} that denotes how many out of the 6 salient anti-takeover measures (including a staggered board) a company has.\textsuperscript{51} The data posted on Lucian Bebchuk’s website that report the Entrenchment Index (as well as the IRRC database from which the Index is derived) does not cover the year 2003, as the data is biannual, and covers only even years. Thus, I check the influence of the Entrenchment Index only for a sub-sample of the companies – the companies that were staggered in 2004 and information about their Entrenchment Index was available. This sub-sample is comprised of 479 companies that were staggered in 2004 (of which 19 that destaggered in 2005). However, this limited sample did not provide me with enough statistics to support or refute a correlation between the Entrenchment Index and the management’s decision whether to destagger.\textsuperscript{52}

In addition, I use the Compustat database to calculate certain company performance-related variables. I look at the companies’ size measured by the log of the company’s total assets, the book-to-market value of equity ratio, market value of assets-to-replacement cost of assets – Tobin’s Q, and return on assets – ROA. Following Kaplan and Zingales (1997) Gompers, Ishii, and Metrick (2003), Bebchuk, Cohen and Ferrell

\textsuperscript{50} Bebchuk, Cohen, and Ferrell (2004) report a correlation between the Entrenchment Index and both reduced firm value and lower stock returns. The measures included in the Entrenchment Index, in addition to staggered boards, are: supermajority requirements for mergers and/or for charter amendments, limits to shareholder bylaws amendments, poison pills, and golden parachute arrangements.

\textsuperscript{51} A high Entrenchment Index indicates that the company has significant anti-takeover measures. When alternative entrenchment mechanisms to the staggered board are in place, the manager can feel that the additional protection is sufficient to allow for destaggering without leaving her too vulnerable. However, since staggered boards present a powerful anti-takeover defense, the existence of additional, less potent, entrenchment measures may not influence the managers’ decision. In addition, without control of the board, a poison pill, which is one of the mechanisms in the Entrenchment Index, is not a strong protection, because those who control the board can revoke the pill. While a poison pill complements the staggered board, limitation on charter amendments, for example, may be viewed as an alternative to the staggered board. The existence of a poison pill indicates that the board that chose to have a pill in place – even though a pill can be implemented at any time without the shareholders’ approval – is currently anxious about hostile takeovers.

\textsuperscript{52} Running the regressions with the larger sample that includes 2005, assuming that the Entrenchment Index does not change in consecutive years, also does not show a significant connection between the Index and the decision whether to destagger.
(2004), and Bebchuk and Cohen (2005), I measure Tobin’s Q as the ratio of (i) the sum of the book value of assets plus the market value of common stock minus the sum of book value of common stock and balance sheet deferred taxes, and (ii) the book value of assets. The industry-adjusted Tobin’s Q, is calculated as the company’s Tobin’s Q minus the median Tobin’s Q in the firm’s industry in the applicable year. Following Bebchuk, Ferrell and Cohen (2004) I identify a firm’s industry by the firm’s 2-digit primary SIC code. I also look at the industry adjusted values of the other performance variables. I calculate ROA as operating income before depreciation divided by total assets (measured once at the close of the prior year, and once as the average of the total assets in the year calculated as one half of the sum of the total assets at the beginning and at the end of the year).

The final sample comprises of a total of 503 companies that had a staggered board throughout 2003, of which 15 companies chose to destagger in 2004, and 489 companies that had a staggered board throughout 2004, of which 19 companies chose to destagger in 2005. Overall, the sample comprises of 992 observations, where each observation refers to a particular company for one particular year (2003 or 2004).53

4.2 Multi-Variable Probit Regression Testing

Using the data described in the previous section I check which of the explanatory variables, listed in Appendix A, influence the decision whether to destagger. And for each of the variables that do, I calculate the direction and extent of the influence. The results of the regressions provide a way to weigh the likelihood of the hypotheses presented in Part 3. Section 4.2.1 describes the probit regression tests used to check the hypotheses. Section 4.2.2 discusses controls for the statistically significant results. Section 4.2.3 summarizes the main statistically significant results of the tests performed.

4.2.1 Probit Regression

A probit regression test is especially designed for studying processes in which the results, i.e. the dependent variable, are binary.54 In this test, the influence of the explanatory variables on the binary result, the dependent variable, is analyzed. In our case the

53 When the performance variables were included, the sample was restricted to 969 observations for which data was available, out of which all 34 companies that destaggered in either 2004 or 2005 were included.
dependent variable, i.e. the manager’s decision, is binary – the manager either decides to destagger or not. I thus check the influence of the explanatory variables on the binary decision to destagger or not.

The probit test models a decision process. Under the probit model the decision to destagger is determined as follows. First, for each company \( i \) the model calculates a number \( Y_i \) that is a linear function of the explanatory variables:

\[
Y_i = \alpha + \beta_1 \cdot \text{TDC}_i + \beta_2 \cdot \text{Age}_i + \beta_3 \cdot \text{Tenure}_i + \beta_4 \cdot \text{Equity}_i
+ \beta_5 \cdot \text{PSR}_i + \beta_6 \cdot \text{TPSR}_i + \beta_7 \cdot \text{EIndex}_i + \beta_8 \cdot \text{Performance}_i + \beta_9 \cdot \text{Year}_i
\]  

(1)

This formula is schematic, and in the actual analysis, I distinguish between several types of equity (e.g., the percentage of equity holdings, the value of the equity, and restricted as opposed to unrestricted types of equity) and include separate firm performance variables. Appendix A contains a list of all the variables used.

In the linear function described by formula (1), \( \alpha, \beta_1, \beta_2, \ldots, \beta_9 \) are fixed coefficients, common to all companies.\(^{55}\) Then, a noise \( \varepsilon_i \) that is normally distributed with mean 0 and standard deviation 1 is added, and \( Z_i = Y_i + \varepsilon_i \) is defined. Management then decides to destagger according to whether \( Z_i > 0 \) or not. Thus, given the explanatory variables, the probability to destagger can be estimated. Explicitly, the estimate for the probability to destagger is the probability that a standard normally distributed random variable, \( \varepsilon_i \), will be bigger than \( -Y_i \).\(^{56}\) In the probit regression analysis, the optimal parameters \( \alpha, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \) and \( \beta_9 \) are determined by a maximum likelihood score.

\(^{54}\) OLS multi-variable regressions, in which the dependent variable was the binary decision whether to destagger, provided similar results, in both direction of influence and statistical significance of the explanatory variables, to the results obtained using the maximum likelihood probit tests reported here. Similarly, statistical tests of the normalized means of the explanatory variables provided analogous results.

\(^{55}\) I use a dummy variable to indicate whether the data is for 2004 or 2005. This dummy year variable helps to neutralize any effects that are specific to a particular year. Inflation is also captured in this variable once we look at the log of monetary values, because the effect of inflation becomes an additive constant once the log is taken: \( \log[X(1+r)] = \log(X) + \log(1+r) \) where \( X \) is the monetary value and \( r \) is the inflation rate.

\(^{56}\) This is the area to the right of \(-Y_i\) under the Bell (Gaussian) curve.
The meaning of each of the $\beta$ parameters can be described as follows: an increase by $(1/\beta_j)$ in the corresponding explanatory variable, e.g., an increase of $(1/\beta_1)$ in TDC, increases $Y$ by one standard deviation. For example, if the result of $Y$ for a given set of explanatory variables is zero, then the probability to destagger is 50% (the probability for a normally distributed random variable to be bigger than $-Y$, when $Y=0$). An increase by $(1/\beta_j)$ in the corresponding explanatory variable in this example increases the probability to destagger to 84% (the probability for a normally distributed random variable to be bigger than $-Y$, when $Y=1$). An additional increase by $(1/\beta_j)$ increases the probability to destagger to 98% (the probability for a normally distributed random variable to be bigger than $-Y$, when $Y=2$), and so on. The probit regression returns estimates for the parameters $\beta_1, \beta_2, \ldots$ that indicate the influence of each explanatory variable on the probability to destagger.

For explanatory variables that describe pecuniary interest, such as total compensation or equity, I also check a connection between the probability to destagger and the log of the explanatory variable. A convex function, such as log, simulates a decreasing marginal utility function, in which the effect of a marginal increase in the explanatory variable declines with the explanatory variable.\textsuperscript{57}

Table 1 shows the results of the estimates for the parameters using the sub-sample of the 992 observations\textsuperscript{58} (these observations include only companies of which the CEO’s holdings are restricted to less than 10%). We can see from column (1) of Table 1 that the coefficient $\beta$ of the dummy variable corresponding to the existence of a precatory shareholder resolution in the last shareholder annual meeting (PSR) is positive with confidence level higher than 99.99%. The coefficient itself is 1.2 with a standard error of 0.25, which means that the existence of such precatory shareholder resolution increases the probability to destagger by about 1.2 standard deviations, in the sense explained above (i.e., it adds 1.2 to $Y$).

Similarly, we can see from column (1) of Table 1 that the coefficient $\beta$ of the variable corresponding to the number of precatory shareholder resolutions in the four years prior to the last annual meeting of the shareholder (TPSR) is positive with confidence level higher than 92%. The coefficient itself is 0.27 with a standard error of

\textsuperscript{57} See supra note [24].

\textsuperscript{58} When the performance variables were included, the sample was restricted to 969 observations for which data was available.
0.15, which means that each such precatory shareholder resolution increases the probability to destagger by about 0.27 standard deviations, in the sense explained above (i.e., it adds 0.27 to Y). And from column (5) of Table 1 we can see that the coefficient β of the variable corresponding to the weighted average of the number of precatory shareholder resolutions in the four years prior to the last annual meeting of the shareholder (WTPSR) is positive with confidence level higher than 94%. The pie-charts in Figures 3 through 7 illustrate the distribution of precatory resolutions in the sample.

We can further see from column (1) of Table 1 that the coefficient β of the variable corresponding to the number of unvested options, including out-of-the-money options, that the CEO held (UVO) is positive with a confidence level of 94%. The coefficient itself is 0.17 with a standard error of 0.09, which means that every additional million options increase the probability to destagger by about 0.17 standard deviations, in the sense explained above (i.e., it adds 0.17 to Y). Figure 1 illustrates the distribution of the number of unvested options in each of the two sets of companies in the sample – the companies that destaggered and the companies that remained staggered. We clearly see that the destaggered companies tend to have higher values of UVO. Figure 2 divides the sample into sets based on the values of UVO, and illustrates the percentage of companies that destaggered in each set. We see that the percentage of companies that destaggered tend to be higher in the sets with higher UVO values.

The variable itself, UVO, includes both in-the-money and out-of-the-money unvested-options. On the other hand, the variable INMONUN includes only in-the-money unvested-options. Because UVO is significantly correlated with the decision to destagger and the test for INMONUN (the value of unvested in-the-money options) did not show any statistically significant correlation with the destaggering decision, it appears that only the out-of-the-money portion of the unvested options is responsible for the positive correlation found.

Interestingly, UVO measures the number of unvested-options and not their value. Like INMONUN, the product of the number of options, UVO, and the stock price, which may be taken as an estimate for the value of the options or at least be proportional to it, also does not provide a statistically significant result. It may be that the number of options that are out-of-the-money is more correlated with the anticipated increase in value of those options following the destaggering decision. Additionally, it may be that
managers are psychologically influenced by the number of the options more than they are by their actual optional value.

The results for the other variables were not statistically significant at the 90% level. These findings confirm hypotheses about a positive correlation between precatory shareholder resolutions and the decision to destagger and a positive correlation between the amount of unvested options (including out-of-the-money) and the destaggering decision. As I have argued above, it is likely that out-of-the-money options have a strong influence. The findings can neither refute nor prove the other hypotheses.59

In order to check whether companies subject to shareholder pressure act differently than those without, I further divided the sample into two sets: companies that had a precatory shareholder resolution asking the board to destagger and those that did not. I reran the probit tests separately on each set. The test provided similar results in direction and magnitude of influence of the explanatory variables. To be sure, because the size of each of the divided samples is smaller, the statistical significance of the results of the separate sets is lower in comparison to the results of the test on the entire sample.

4.2.2 Controls for Sensitivity of Results

In the previous Section, I report finding statistically significant correlation between the decision to destagger and each of the explanatory variables: PSR, WTPSR, and UVO. Are these variables directly tied with the decision, or do they only reflect an indirect correlation? Other parameters may also influence management decision to destagger. Such other parameters potentially affect also the explanatory variables. Thus, the coefficients found in the regressions may not reflect the direct interaction between the explanatory variables and the dependent variable, but rather include the influence of the other variables on the decision to destagger.

For example, the performance of the company may, hypothetically, have a direct effect on management decision to destagger. At the same time, however, the performance of the company may also directly affect the shareholder decision whether to pass a shareholder precatory resolution (PSR). Similarly, the performance of the company may directly affect the number of options the manager has, the value of the options and whether those options are out-of-the-money. Thus, to control for the effect of the performance of the company, and isolate it from the interaction between the decision to

59 See Part 3 above for a description and discussion of the hypotheses.
destagger and the explanatory variables, the performance variable is included in a multivariable regression. The multivariable regression tests whether the coefficients of the explanatory variables, PSR and UVO, remain at a similar magnitude and are statistically significant despite the inclusion of the performance of the company as a control variable.\textsuperscript{60}

As described in Section 4.2.1, the multivariable regression models that were tested included the various variables listed in Appendix A. In the multivariable regression test, some of the explanatory variables play a dual role as control variables. In the example above, the various estimates for the company’s performance serve as control variables for the impact of statistically significant explanatory variables on the dependent variable. Similarly, the tenure of the manager, the size of her salary, the amount of shares owned, and her percentage holding can all be connected to the number of options the manager has and, more specifically, to the UVO of the manager, or to the outrage of the shareholders, and thus to PSR and WTPSR.

For example, a manager with more tenure may receive more compensation, including unvested options. Conversely, new managers may receive large incentive compensation packages in the form of unvested options, these options vest with the tenure of the manager. Thus, the tenure of the manager may impact the number of UVOs she has. Likewise, since the exercise price of compensation options is usually set at the price of the underlying stock at the date of grant, the tenure of the manager is also potentially related to the number of out-of-the-money options, because the passage of time since the manager received the option may be connected to the tenure and to the likelihood of a change in the stock price.

As can be seen from columns (1-7) of Table 1, including the additional variables in the regressions does not significantly change the magnitude of the coefficients of UVO, PSR, and WTPSR. These three variables remain statistically significant within the 10% level or better also in a multivariable analysis.

In addition to the factors tested in the multivariable analysis described in Section 4.2.1, a control variable that measures the relative change in the price of the stock should be added. This is because the analysis of the statistical results suggests that out-of-the-money unvested options influence the decision to destagger, and because out-of-the-

\textsuperscript{60} WTPSR is unlikely to be affected by the recent performance variables, because it measures past behavior of shareholders. It may, however, be correlated with past performance of the company.
money options arise when the stock price declines below the strike price of the option, i.e. the stock price at the date of the grant. Thus, for each observation of UVO, I calculated the relative change in the stock price, \( PC = \frac{R_t - R_{t-1}}{R_{t-1}} \), where \( R_t \) is the adjusted stock price at the time UVO is calculated, reported by Compustat as PRCC. For robustness, I used five different time spans: starting a year, half a year, a quarter, and a month before the date in which the number of options is reported, and also a quarter afterwards.

I ran multivariable probit regressions with these control variables added, and the three explanatory variables PSR, WTPSR, and UVO. This multivariable regression checks the sensitivity of the interaction between UVO and the decision to destagger, given the added control variables. As columns (1-5) of Table 2 show, while the coefficients of the three explanatory variables remain similar and statistically significant, the new control variables do not show statistically significant coefficients.\(^{61}\) This result seems consistent with the fact that the performance variables did not change the results of the regression. And, as hypothesized in Section 3.2.1., decrease in the stock price may motivate the management to cling to the staggered board, because the risk of a hostile takeover is likely to be higher – an opposite influence than that of the UVOs.

In addition, I used industry dummy variables as control variables. I assigned each company one of twelve industry portfolios based on its four-digit SIC code, following the industry definitions in Kenneth French’s website. To be sure, the inclusion of a large number of industry dummies reduces the degrees of freedom, but the coefficients of the three explanatory variables PSR, WTPSR, and UVO remain similar and statistically significant within the 10% level or better, as can be seen in column (10) of Table 1.

### 4.2.3 Summary of Statistical Findings and Suggested Implications

As described in Section 4.2.1 above, the results of this study indicate a strong correlation between management decision to destagger and shareholder pressure. This suggests that shareholders’ efforts to influence the board may be fruitful. This result cannot indicate

\(^{61}\) The coefficient of one of the five new control variables, CP3AMO, was statistically significant at the 9% level in one of the models tested, as is reported in column (5) of Table 2. However, in a regression with no other independent variables the coefficient of CP3AMO was not statistically significant. Also, the magnitude of the coefficient of CP3AMO varied significantly in different models, as is shown in columns (5-8) of Table 2. It seems that there is not sufficient statistics to determine that this variable is a significant explanatory variable for the decision to destagger. The coefficients found may result from an interaction between PSR and CP3AMO.
whether the level of the shareholders’ informal power and influence on the board is efficient or suboptimal; it does, however, show that the shareholders are not utterly powerless.

This study also finds a significant statistical relationship between the decision to destagger and the unvested (including out-of-the-money) options of the CEO. This kind of equity compensation seems to contribute significantly to agent-principal alignment of interests. This suggests that certain types of performance-related compensation influence management’s decisionmaking. Unrestricted equity as well as in-the-money options, however, do not seem to motivate the manager to destagger, at least within the statistical errors of this test. This connection between the manager’s equity and the decision whether to destagger may also suggest that managers’ decision whether to destagger is motivated by selfish reasons, rather than the purported best interests of the shareholders.

5. The Market’s Reaction to Destaggering – Event Study
The market reaction may play an important factor in understanding managers’ behavior. The motivation behind the destaggering may well be management’s hope that the market will compensate it by increasing the stock price. Thus, I check the market reaction to the board’s destaggering announcement to gain a fuller picture of the destaggering phenomenon.

Stock price increase may be explained by anticipated increase in company value following the removal of anti-takeover protections (see Bebchuk and Cohen, 2005). Destaggering may cause the public to raise the value assigned to the company in anticipation of better use of the company’s resources. A destaggered company may be managed more efficiently either because of better monitoring or because of an actual takeover.

Managers may be interested in increasing the stock-price because of their own equity holding stakes. Another explanation for the managers’ motivation may be a positive correlation between the stock price and management future compensation. The announcement by the board of its intent to destagger may also be explained by a

---

62 See supra Part 3 discussing possible hypotheses relating to the manager’s equity holdings.

63 An alternative possibility is suggested by Jennifer Arlen and Eric Talley (2003) who argue that unstaggered boards may engage in value reducing activities aimed at preventing hostile takeover attempts.
managerial signal that the company is well managed and may thus be followed by an increase in stock price.

Generally, managers who optimize the use of the company’s resources face a lower probability of being replaced by an opportunistic raider seeking to make money from running the company better. Thus, managers who do a better job of running the company may be more likely to agree to destagger the board because their need of anti-takeover protection is lower. Such managers may use this tactic to justify higher compensation, if they are unable to do so in less expensive ways. Part of the anticipated increase in compensation should be attributed to the probability of being replaced, the other part may reflect compensation for signaling credibly that they are better managers (or at least signaling that they believe that they have better managerial skills).^64

To see the reaction of the market to the board’s decision to destagger, I conduct an event study. There is evidence that the market values companies without staggered boards more than companies with staggered boards. Researches have studied and compared Tobin Q’s of companies with and without staggered boards and found higher values attributed to companies without staggered boards (see Bebchuk and Cohen, 2005). To complement these studies I look for the market’s reaction to destaggering in 2004.

A recent independent study, conducted by Olubunmi Faleye (2005), checked for cumulative abnormal returns following the announcement dates of destaggering in the years 1996-2002. Faleye’s study found that the average cumulative abnormal return of the 24 companies in his sample that destaggered during the seven year period was 1.34% in the [-5, 0] window.

My event study covered companies that destaggered in 2004. I checked for cumulative abnormal returns following the announcement dates compared both to the market return and to the applicable industry return during several different event windows. When looking at a sample of 23 non-financial trading companies that destaggered in 2004 I found statistically significant cumulative abnormal returns. The mean cumulative abnormal return for a 30 trading-day window [-1,+28], starting a day before the announcement date, was 4.5%, the median was 2.3% and the weighted average

---

^64 To be sure, the total compensation for destaggering should be lower than the increased risk from destaggering faced by the less skilled managers in order for the signaling to work.
CAR was WACAR = 3.5% (±2%) when using the applicable industry portfolio. The results came out statistically significant at the 4% level.

However, when I further restricted the sample to only companies whose managers’ had less than 10% equity holdings and only charter-based boards, I was left with a sub-sample of only 15 companies that did not provide sufficient statistics for statistically significant results. Appendix B provides a detailed description of the methodology of the event studies I have conducted.

6. Conclusion
This paper discussed a puzzling managerial behavior – some managers volunteered to dismantle the staggered board structure that entrenches them in their position. In an attempt to understand the motivation of such managers, I studied the effect of various characteristics of the company and CEO on this phenomenon. This study has implications on current debates on shareholder power and management compensation. In particularly, it suggests that shareholders are more potent than might appear from a simple study of their formal rights. To be sure, this power to influence the board is limited in comparison to formal rights to control. Indeed the majority of companies with precatory resolutions do not rush to destagger. Nonetheless, the shareholders are not completely defenseless. I found a statistically significant connection between precatory resolutions and the management decision to destagger.

While I did not find evidence that straight equity compensation helps management to focus on the shareholders’ interests, I did find statistically significant evidence that restricted, unvested, (including out-of-the-money) options motivate the managers to destagger. This finding highlights the importance of specially tailored performance-based compensation to aligning the interests of management and shareholders, and it demonstrates the weakness of straight-equity.

I believe that further study of the decision whether to destagger or not should be conducted. Such study may explore insider activities, both following and preceding the announcement of the board’s intent to destagger. A study that compares the performance of destaggered companies and staggered companies in the applicable industries, both before and after the destaggering, may shed further light on the decision to destagger. I also suggest checking changes in the compensation of key employees following destaggering (both in amount and type of compensation).
For example, destaggering may be used as a managerial signal that the company is well-managed. Generally, managers who optimize the use of the company’s resources face a lower probability of being replaced by an opportunistic raider seeking to make money from running the company better. Thus, managers who do a better job of running the company may be more likely to agree to destagger the board, provided they benefit from the destaggering, for example by being able to extract higher rents following the destaggering.

Additional investigation may look into the existence of special shareholder characteristics, such as large blockholders and institutions. Such tests may reveal further explanations as to why managers choose to destagger.
Appendix A

**DESCRIPTION OF THE VARIABLES USED IN THE REGRESSION MODELS.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type / units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td>(years)</td>
<td>CEO’s age as of the applicable year.</td>
</tr>
<tr>
<td><strong>ALogTA</strong></td>
<td>(number)</td>
<td>Industry-adjusted log of the value of the total assets – the log of the company’s value of total assets minus the median log of total assets in the applicable industry.</td>
</tr>
<tr>
<td><strong>AQ</strong></td>
<td>(number)</td>
<td>Industry-adjusted Tobin’s Q – Tobin’s Q of the company minus the median Tobin’s Q in the company’s industry.</td>
</tr>
<tr>
<td><strong>BTM</strong></td>
<td>(number)</td>
<td>Book-to-market value of equity.</td>
</tr>
<tr>
<td><strong>DC</strong></td>
<td>(binary)</td>
<td>Indicates whether the board decided to destagger. DC=0 denotes that the board favored destagging.</td>
</tr>
<tr>
<td><strong>EIndex</strong></td>
<td>(1,2,…,6)</td>
<td>The Bebchuk, Cohen and Ferrell’s Entrenchment Index, counting the number of entrenchment mechanisms the company has out of the salient six (including staggered board).</td>
</tr>
<tr>
<td><strong>InByTDC</strong></td>
<td>(number)</td>
<td>INMONUN divided by TDC.</td>
</tr>
<tr>
<td><strong>INMONE</strong></td>
<td>(× $1,000)</td>
<td>Defined by ExecuComp as “the value of Exercisable In-the-Money Options. This represents the value the officer would have realized at yearend if he had exercised all of his vested options that had an exercise price below the market price. This figure includes only in-the-money options, as out of the money options are worth zero.”</td>
</tr>
<tr>
<td><strong>Industry Dummies</strong></td>
<td>(binary)</td>
<td>Indicates whether the company is in one of twelve industry portfolios, as defined in Kenneth French’s website, based on the company’s four-digit SIC code.</td>
</tr>
<tr>
<td><strong>INMONUN</strong></td>
<td>(× $1,000)</td>
<td>Defined by ExecuComp as “the value of Unexercisable In-the-Money Options. This represents the value the officer would have realized at yearend if he had exercised all of his unvested options that had an exercise price below the market price. This figure includes only in-the-money options, as out of the money options are worth zero.”</td>
</tr>
<tr>
<td><strong>PC1MO</strong></td>
<td>(number)</td>
<td>Indicates the relative change in the stock price over a 1 month period ending at the year end.</td>
</tr>
<tr>
<td>Variable</td>
<td>Type / units</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PC12MO</td>
<td>(number)</td>
<td>Indicates the relative change in the stock price over a 12 month period ending at the year end.</td>
</tr>
<tr>
<td>PC3MO</td>
<td>(number)</td>
<td>Indicates the relative change in the stock price over a 3 month period ending at the year end.</td>
</tr>
<tr>
<td>PC3AMO</td>
<td>(number)</td>
<td>Indicates the relative change in the stock price over a 3 month period beginning at year end.</td>
</tr>
<tr>
<td>PC6MO</td>
<td>(number)</td>
<td>Indicates the relative change in the stock price over a 6 month period ending at the year end.</td>
</tr>
<tr>
<td>PRCNTSHR</td>
<td>(number)</td>
<td>Percent of shares owned by the CEO (as reported).</td>
</tr>
<tr>
<td>PSR</td>
<td>(binary)</td>
<td>Indicates whether there was a precatory shareholder resolution to destagger in the previous year.</td>
</tr>
<tr>
<td>Q</td>
<td>(number)</td>
<td>Tobin’s Q – market value of assets-to-replacement cost of assets – the ratio of (i) the sum of the book value of assets plus the market value of common stock minus the sum of book value of common stock and balance sheet deferred taxes, and (ii) the book value of assets.</td>
</tr>
<tr>
<td>ROA</td>
<td>(number)</td>
<td>Return on assets – operating income before depreciation divided by total assets measured at the beginning of the period.</td>
</tr>
<tr>
<td>RSTKHLD</td>
<td>(∗ 1,000 shares)</td>
<td>Defined by ExecuComp as “the number of shares of restricted stock held [by the CEO] at the end of the fiscal year.”</td>
</tr>
<tr>
<td>RSTKHLDV</td>
<td>(∗ $1,000)</td>
<td>Defined by ExecuComp as “the value of [the CEO’s] restricted stock holdings at the end of the year.”</td>
</tr>
<tr>
<td>SHROWNPC</td>
<td>(number)</td>
<td>Percent of shares owned by the CEO (as calculated).</td>
</tr>
<tr>
<td>TA</td>
<td>(∗ $1,000,000)</td>
<td>Company’s size – value of total assets.</td>
</tr>
<tr>
<td>TDC1</td>
<td>(∗ $1,000)</td>
<td>Defined by ExecuComp as the “Total compensation for the individual year, comprised of the following: Salary, Bonus, Other Annual, Total Value of Restricted Stock Granted, Total Value of Stock Options Granted (using Black-Scholes), Long-Term Incentive Payouts, and All Other Total.”</td>
</tr>
<tr>
<td>TENURE</td>
<td>(years)</td>
<td>CEO’s tenure as of the applicable year.</td>
</tr>
<tr>
<td>Variable</td>
<td>Type / units</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TPSR</td>
<td>(0,1,2,…4)</td>
<td>Indicates the number of precatory shareholder resolutions to destagger that passed in the four-year period prior to the previous year.</td>
</tr>
<tr>
<td>UVO</td>
<td>(× 1,000,000 shares)</td>
<td>Unvested Options – Defined by ExecuComp as UEXNUMUN, “the number of unexercised options that the executive held at yearend that had not vested. This figure includes both in and out-of-the-money options.”</td>
</tr>
<tr>
<td>ValByTDC</td>
<td>(number)</td>
<td>VALTSH divided by TDC</td>
</tr>
<tr>
<td>VALTSH</td>
<td>(× $1,000)</td>
<td>Shares owned by CEO multiplied by stock price.</td>
</tr>
<tr>
<td>VO</td>
<td>(× 1,000 shares)</td>
<td>Vested Options – Defined by ExecuComp as UEXNUMEX, “the number of unexercised options that the executive held at yearend that were vested. This figure includes both in and out-of-the-money options.”</td>
</tr>
<tr>
<td>WTPSR</td>
<td>(0…1)</td>
<td>A weighted average of the number of precatory shareholder resolutions to destagger that passed in the four-year period prior to the previous year. The weights assigned are 40%, 30%, 20%, and 10% respectively starting from the most recent year.</td>
</tr>
<tr>
<td>YEAR</td>
<td>(0,1)</td>
<td>Indicates the year of the observation. YEAR=1 refers to data from 2004 (and destaggering in 2005) while YEAR=0 refers to data from 2003 (destaggering in 2004).</td>
</tr>
</tbody>
</table>
### TABLE 1. THE DECISION WHETHER TO DESTAGGER – PROBIT RESULTS

The sample consists of observations of companies with staggered boards, of which 34 are of companies that destaggered in either 2004 or 2005. The dependent variable is a dummy variable denoting whether the company dismantled the staggered board or not. The independent variables include the number of unvested options of the CEO (UVO); the CEO’s restricted stock (RSTKHLD); the log of the value of the CEO’s unrestricted stock (LogValTSh); the number of vested options of the CEO (VO); the value of unvested in-the-money options (INMONUN); the log of the CEO’s annual compensation (LogTDC); the value of the CEO’s unrestricted stock divided by the CEO’s annual compensation (ValByTDC); CEO’s percent shareholdings (PrcntSh); CEO’s age (Age); CEO’s tenure (Tenure); a dummy variable denoting whether there was a precatory shareholder resolution to destagger in the previous annual shareholder meeting (PSR); the number of precatory resolutions to destagger in the 4 year period prior to the last annual meeting (TPSR); a weighted average of precatory resolutions to destagger in the 4 year period prior to the last annual meeting (WTPSR); the industry adjusted Book-to-market value of equity (ABTM); the industry adjusted Tobin’s Q (AQ); the industry adjusted log of total assets (ALogTA); and a dummy variable for the year (2003; 2004). *, **, and *** indicate significance levels at 10%, 5%, and 1% levels respectively. Standard errors are reported in parentheses.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-2.66</td>
<td>-2.24</td>
<td>-2.45</td>
<td>-3.00</td>
<td>-2.24</td>
<td>-2.46</td>
<td>-2.64</td>
<td>-2.23</td>
<td>-2.14</td>
<td>-2.93</td>
</tr>
<tr>
<td>PSR</td>
<td>1.24</td>
<td>1.25</td>
<td>1.31</td>
<td>1.23</td>
<td>1.25</td>
<td>1.27</td>
<td>1.24</td>
<td>1.25</td>
<td>1.30</td>
<td>1.30</td>
</tr>
<tr>
<td>TPSR</td>
<td>0.27</td>
<td>0.24</td>
<td>0.23</td>
<td>0.26</td>
<td>0.27</td>
<td>0.26</td>
<td>0.26</td>
<td>0.26</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>WTPSR</td>
<td>0.95</td>
<td>0.85</td>
<td>1.01</td>
<td>0.94</td>
<td>1.03</td>
<td>1.03</td>
<td>1.07</td>
<td>0.59</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>UVO</td>
<td>0.17</td>
<td>0.16</td>
<td>0.14</td>
<td>0.14</td>
<td>0.15</td>
<td>0.14</td>
<td>0.16</td>
<td>0.16</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>VO</td>
<td>2.7E-05</td>
<td></td>
<td>2.7E-05</td>
<td></td>
<td>(4.6E-05)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RSTKHLD</td>
<td>2 E-04</td>
<td></td>
<td>2 E-04</td>
<td></td>
<td>(4 E-04)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LogValTSh</td>
<td>-0.10</td>
<td></td>
<td>-0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PrcntSh</td>
<td>4E-03</td>
<td></td>
<td>2E-03</td>
<td>1E-02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INMONUN</td>
<td>2E-07</td>
<td></td>
<td>2E-07</td>
<td>(6E-06)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LogTDC</td>
<td>2E-03</td>
<td></td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ValByTDC</td>
<td>-1.5E-04</td>
<td></td>
<td>(8.7E-04)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.013</td>
<td></td>
<td>0.012</td>
<td>0.011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>0.01</td>
<td></td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABTM</td>
<td>0.24</td>
<td></td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AQ</td>
<td>-0.06</td>
<td></td>
<td>-0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALogTA</td>
<td>0.08</td>
<td></td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AROA</td>
<td>0.45</td>
<td></td>
<td>0.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>0.14</td>
<td>0.15</td>
<td>0.16</td>
<td>0.14</td>
<td>0.17</td>
<td>0.16</td>
<td>0.17</td>
<td>0.18</td>
<td>0.14</td>
<td>0.17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>Observations</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=992</td>
<td>N=992</td>
<td>N=969</td>
<td>N=992</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>12 portfolios</td>
</tr>
<tr>
<td></td>
<td>N=992</td>
<td>N=992</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=969</td>
<td>N=963</td>
</tr>
</tbody>
</table>

http://law.bepress.com/alea/17th/art5
TABLE 2. THE DECISION WHETHER TO DESTAGGER – PROBIT RESULTS

The sample consists of 965 observations of companies with staggered boards, of which 34 are of companies that destaggered in either 2004 or 2005. The dependent variable is a dummy variable denoting whether the company dismantled the staggered board or not. The independent variables include the number of unvested options of the CEO (UVO); a dummy variable denoting whether there was a precatory shareholder resolution to destagger in the previous annual shareholder meeting (PSR); a weighted average of precatory resolutions to destagger in the 4 year period prior to the last annual meeting (WTPSR); the relative change in the stock price over 12 month period (PC12MO); the relative change in the stock price over 6 month period (PC6MO); the relative change in the stock price over 3 month period (PC3MO); the relative change in the stock price over 1 month period (PC1MO); the relative change in the stock price over 3 month period beginning at year end (PC3AMO); and a dummy variable for the year (2003; 2004). *, **, and *** indicate significance levels at 10%, 5%, and 1% levels respectively. Standard errors are reported in parentheses.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-2.33</td>
<td>-2.30</td>
<td>-2.17</td>
<td>-2.29</td>
<td>-2.22</td>
<td>-2.04</td>
<td>-2.12</td>
<td>-2.05</td>
<td>-2.12</td>
<td>-2.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.17)</td>
<td>(0.18)</td>
<td>(0.17)</td>
<td>(0.16)</td>
<td>(0.15)</td>
<td>(0.13)</td>
<td>(0.13)</td>
<td>(0.13)</td>
<td>(0.13)</td>
<td>(0.12)</td>
<td></td>
</tr>
<tr>
<td>UVO</td>
<td><strong>0.15</strong></td>
<td><strong>0.16</strong></td>
<td><strong>0.15</strong></td>
<td><strong>0.15</strong></td>
<td><strong>0.15</strong></td>
<td><strong>0.23</strong></td>
<td><strong>0.23</strong></td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.07)</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td>(0.07)</td>
<td>(0.07)</td>
<td>(0.07)</td>
<td>(0.07)</td>
<td>(0.07)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>PSR</td>
<td>*<strong>1.26</strong></td>
<td>*<strong>1.25</strong></td>
<td>*<strong>1.26</strong></td>
<td>*<strong>1.27</strong></td>
<td>*<strong>1.29</strong></td>
<td>*<strong>1.33</strong></td>
<td>*<strong>1.58</strong></td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
</tr>
<tr>
<td></td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.26)</td>
<td>(0.21)</td>
</tr>
<tr>
<td>WTPSR</td>
<td><em>0.95</em>*</td>
<td><em>0.96</em>*</td>
<td><em>0.93</em>*</td>
<td><em>0.95</em>*</td>
<td><em>1.08</em>*</td>
<td><strong>1.17</strong></td>
<td><strong>2.30</strong></td>
<td>(0.50)</td>
<td>(0.50)</td>
<td>(0.50)</td>
<td>(0.49)</td>
</tr>
<tr>
<td></td>
<td>(0.50)</td>
<td>(0.50)</td>
<td>(0.50)</td>
<td>(0.49)</td>
<td>(0.50)</td>
<td>(0.49)</td>
<td>(0.49)</td>
<td>(0.49)</td>
<td>(0.49)</td>
<td>(0.49)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>PC12MO</td>
<td>0.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC6MO</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC3MO</td>
<td>-0.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.56)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC1MO</td>
<td>0.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC3AMO</td>
<td><strong>-1.06</strong></td>
<td><strong>-0.34</strong></td>
<td><strong>-1.02</strong></td>
<td><strong>-0.22</strong></td>
<td><strong>-0.62</strong></td>
<td><strong>-0.53</strong></td>
<td><strong>-0.62</strong></td>
<td>(0.62)</td>
<td>(0.53)</td>
<td>(0.62)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>Year</td>
<td>0.22</td>
<td>0.21</td>
<td>0.16</td>
<td>0.19</td>
<td>0.10</td>
<td>0.17</td>
<td>0.06</td>
<td>0.12</td>
<td>0.19</td>
<td>0.16</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.16)</td>
<td>(0.17)</td>
<td>(0.16)</td>
</tr>
</tbody>
</table>

We can see that the inclusion of the control variables (PC12MO); (PC6MO); (PC3MO); and (PC1MO) changes the coefficient of UVO only slightly, and its statistical significance persists.
Figure 1.

**DISTRIBUTION OF THE NUMBER OF UNVESTED OPTIONS INCLUDING UNDERWATER**

DC indicates the decision whether to destagger:
0=repeal staggered board; 1=remain staggered
Figure 2.

Percentage of Companies that Destaggered within each range of UVOs
Figures 3 – 9

Distribution of Precatory Resolutions

Companies with a Precatory Shareholder Resolution in the Previous Year

All Companies

- PSR: 5%
- NO PSR: 95%

Companies that Declassified

- PSR: 44%
- NO PSR: 56%

http://law.bepress.com/alea/17th/art5
We can see from the charts that the set of companies that destaggered had a higher percentage of companies with a precatory resolution in the year before the destaggering.

**Percentage of Companies with at least one Precatory Shareholder Resolution in the last five years before the Company Destaggered**
We can see from the charts that 41% of the companies in the sample destagged without having any precatory shareholder resolution asking the board to destagger in the years before.
Companies with Classified Boards in 2005
Number of Precatory Resolutions in the Previous Years

- 4% 1%
- 94%

0
1
2
3
4
Appendix B

Methodology of Event Study

To check whether there is a market reaction to the decision to destagger, I have conducted event studies using the market-model method. The event studies check for abnormal returns attributable to the destaggering. The hypothesis I check in the event studies is that in anticipation of the destaggering there is a one-time increase in the price of the firm that is identified as abnormal return. The abnormal return is in expectation of an improvement in the firm’s performance. The improvement in the firm’s performance derives from improved management performance and potential efficient takeover, both of which are driven by the elimination of management protection. Indeed, in their study, Bebchuk and Cohen (2005) find that companies that are not staggered enjoy a statistically significant higher Tobin’s Q than companies with staggered boards.

1. Data

The data includes companies that destaggered in 2004, and the announcement dates, i.e. the dates the market learned about the destaggering. The following describes the process of collecting the data.

1.1 Companies

37 companies were included in the Georgeson Shareholder report for 2004 as companies whose board initiated a shareholder vote for destaggering. Of these firms, 2 boards recommended against destaggering. In addition, by looking at the SIC codes of the companies I have identified 10 companies categorized as Financial Trading (8 of which are real estate financial trusts - REITs). In one of the companies, National Medical Health Card Systems, the destaggering resolution was brought to the shareholders' vote as a condition to an investment transaction by an acquirer which eventually resulted in a change in control. I excluded

---


66 See, e.g., Bebchuk & Cohen, supra note 3, for exclusion of REITs; Daines, supra note 59, for including only nonfinancial companies.
this company from the final sample because any abnormal returns that may be detected may be attributable to the transaction rather than the destaggering. Cendant was also removed from the sample because it seems that the resolution has been influenced by a lawsuit settlement with a shareholder following an accountant scandal from 1998. (Both companies, though, do not seem to influence the results.)

After these exclusions, I was left with 23 non-financial companies whose board has initiated and pushed for destaggering. These firms consist of the initial sample. I further continued to exclude additional companies because of dual class structure, bylaws-based staggered board, and more than 10% CEO beneficial ownership.67 After these exclusions, the final sample consists of only 15 companies.

1.2 Dates
In order to find the initial announcement date, the date when the market first learns of the proposed board initiated destaggering, I have conducted database-searches. I have searched Google, Factiva, and Lexis-Nexis for press releases, newspaper articles, and preliminary SEC filings reporting management’s plan to destagger for all the companies whose boards decided to destagger in 2004. Since there is likely to be a gap between the time the board decides to destagger (or a public discussion about it) and the following annual shareholders’ meeting, when the destaggering is proposed, I searched the databases using an extended time restriction starting from 1/1/2003 to 1/1/2005.

Of the 35 companies whose boards initiated shareholder destaggering resolutions, I found only 12 reports that preceded the date of the preliminary filings with the SEC (7 of which were part of the restricted subset of 23 firms). I follow prior work of event studies where the earlier of the proxy filing or the announcement date was used as the date the market had initially learned of the event (see, e.g., Perry and Peyer, 2005). To be sure, the information may have leaked to the market, without a formal notice, immediately following the board resolution or even prior to that. This may negatively affect the robustness of the event study. To decrease this possibility that the market had learned of the proposed destaggering at a prior date, I check event windows that start before the announcement date found in the media database searches.

In addition to the initial announcement date, when the market learns of management’s intent to ask the shareholders to destagger the board, the actual date of the

67 See Part 4 for description and explanation of these exclusions.
binding shareholder resolution to destagger initiated by the board may also be important. This is because as long as there is no binding resolution it is possible that the board will stay staggered. Where the Charter requires a super majority vote this probability is especially high.

Cendant, for example, successfully passed a destaggering resolution in 2004. However, in 2002, a similar resolution failed even though more than 75% of the shares voted favored the destaggering resolution. The company’s charter required that at least 80% of the outstanding shares vote in favor.

Thus, there are two lists of event dates: the earlier announcement date and the actual resolution date. The later date was added to control for market hesitation due to possible dispersed shareholder apathy, as might have been the case in Cendant. A positive abnormal return around the announcement date may be expected, because shareholders would presumably approve a destaggering resolution.

2. Market-model event studies

Each company’s parameters are derived in a [-250, -20] days estimation period, where day 1 is the announcement date. For the explanatory variable of the ordinary-least-squares regression for each company, I use once the returns of the market and once the returns of each firm’s relevant industry (using the companies’ 4 digit SIC codes and the 49 industry portfolios from Kenneth French’s website68 in the applicable [-250, -20] days estimation period. I calculated two pairs of intercepts and slopes (α and β respectively) for each company, from the regression of the following formula (2).

\[
RET_{it} = \alpha_i + \beta_i \times MarketReturn_t + \epsilon_{it} \tag{2}
\]

Here \(RET_{it}\) is the return of the \(i^{th}\) company in day \(t\), \(\alpha_i\) and \(\beta_i\) are the intercept and slope for the \(i^{th}\) company, \(MarketReturn_t\) is the market or industry return in day \(t\), and \(\epsilon_{it}\) is the random noise. I used the daily market returns and the daily company returns reported in CRSP database and the applicable industry returns for each firm from French’s website. I derived estimators for \(\alpha_i\) and \(\beta_i\) (denoted by \(\hat{\alpha}_i\) and \(\hat{\beta}_i\)) using an ordinary-least-squares (OLS) regression for each company separately.

---

68 Available at mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html
Then, I checked the null hypothesis of stock returns, for both event date lists – the earlier announcement date and the actual binding resolution date. I used both a 3 trading day event window, beginning on the trading-day before the announcement/resolution date, and three different longer trading-day event windows, [-10, 20], [-1, 19] and [-1, 28]. I checked a total of 8 different event windows for each company. The different event windows were chosen to accommodate different assumptions about information absorption in the market.

A three-day window may be too small, as it presumes that the markets are highly efficient. Thus, I also checked a 21 and a 30 day window around the announcement date, to allow the market to absorb the information. I checked both a window that starts at day \( t=-1 \) and a window that starts at day \( t=-10 \). The latter starting date entertains an assumption that the market learns of the proposed destaggering prior to the initial public announcement date (the earliest date that I was able to identify from the databases searches described above).

Using each company’s estimated parameters (\( \hat{\alpha}_i \) & \( \hat{\beta}_i \)) I estimate the company’s expected return (EFR) for each day of the event window. I use once the company’s parameters derived from the market return and the market return in the event window, and once the firm’s parameters derived from the applicable industry return and the industry portfolio return, as described algebraically in the following formula (3).

\[
(EFR)_i = \hat{\alpha}_i + \hat{\beta}_i \times \text{(Market/Industry return)}_i
\]  

The estimated returns are then compared with the actual returns by subtracting the actual returns of the companies from the calculated estimated returns. This provides us with the abnormal returns of the firms (ARs). All the abnormal returns for the days of the event windows are added, to obtain the cumulative abnormal returns (CARs). As I aggregate the abnormal returns by simply adding the returns, I lose some accuracy by not taking into account the compounding effect. This is especially so for the longer event windows. To correct this, I recalculate each company’s parameters and the abnormal returns using \( \ln(1+X) \) rather than \( X \), where \( X \) is the return. Using the natural logarithm function allows us to get the same compound effect by adding the abnormal returns of each day in the event window without multiplying, as is shown in formula (4). (This also
facilitates the calculation of the standard deviation needed for the statistical significance checks.)

\[ 1 + CAR = \prod_{t=1}^{n} (1 + AR_t) \Leftrightarrow \ln(1 + CAR) = \sum_{t=1}^{n} \ln(1 + AR_t) \]  

(4)

where CAR stands for the cumulative abnormal return, AR.

The cumulative abnormal returns are then normalized by dividing each CAR by its standard deviation; the result is denoted by SCAR. The calculation of the standard deviation, which is a special case of the general theory described in Campbell, Lo & MacKinlay (1997), is as follows.

The SCAR is defined as

\[ SCAR_t \equiv \frac{CAR_t}{\sqrt{\text{var}(CAR_t)}} \]  

(5)

Assuming the null hypothesis, the CAR’s variance has two components: the statistical uncertainty in the estimators of each firm’s parameters (\( \hat{\alpha}_i \) & \( \hat{\beta}_i \)), and the noise (\( \varepsilon_{it} \)) affecting the actual returns measured at the event window.

\[ AR_{it} = RET_{it} - EFR_{it} = RET_{it} - \hat{\alpha}_i - \hat{\beta}_i \times (\text{Market/Industry return}), \]

\[ = (\alpha_i - \hat{\alpha}_i) + (\beta_i - \hat{\beta}_i) \times (\text{Market/Industry return}) + \varepsilon_{it} \]  

(6)

assuming that formula (2) holds throughout the event window, under the null hypothesis.

The number of days in the event window is denoted by N, starting with day \( t_1 \) and ending at \( t_2 \). Thus, \( N = t_2 - t_1 + 1 \). The cumulative market return for the event period is denoted by CMR.

\[ CMR \equiv \sum_{t=t_1}^{t_2} (\text{Market/Industry return})_t \]  

(7)

The cumulative abnormal returns can then be calculated:

\[ CAR_i = \sum_{t=t_1}^{t_2} (RET_{it} - EFR_{it}) = \sum_{t=t_1}^{t_2} RET_{it} - N\hat{\alpha}_i - \hat{\beta}_i \times CMR \]

\[ = N(\alpha_i - \hat{\alpha}_i) + (\beta_i - \hat{\beta}_i) \times CMR + \sum_{t=t_1}^{t_2} \varepsilon_{it} \]  

(8)
Because the estimation window and the event window are chosen so that they do not overlap, there is no correlation between \( \sum_{t=t_1}^{t_2} \varepsilon_{it} \) and either \( \hat{\alpha}_i \) or \( \hat{\beta}_i \). Thus, I can calculate the variance of CAR as

\[
\text{var}(CAR_i) = \text{var}\left( \sum_{t=t_1}^{t_2} \varepsilon_{it} \right) + N^2 \text{var}(\hat{\alpha}_i) + (CMR)^2 \text{var}(\hat{\beta}_i) + 2N(CMR)\text{cov}(\hat{\alpha}_i, \hat{\beta}_i) \quad (9)
\]

Under the standard assumptions that the noises \( \varepsilon_{it} \) are not correlated and have the same standard deviation, which I denote by \( \sigma \), I get

\[
\text{var}\left( \sum_{t=t_1}^{t_2} \varepsilon_{it} \right) = \sum_{t=t_1}^{t_2} \text{var} \varepsilon_{it} = N\sigma^2 \quad (10)
\]

Combining equations (9) and (10) I arrive at

\[
\text{var}(CAR_i) = N\sigma^2 + N^2 \text{var}(\hat{\alpha}_i) + (CMR)^2 \text{var}(\hat{\beta}_i) + 2N(CMR)\text{cov}(\hat{\alpha}_i, \hat{\beta}_i) \quad (11)
\]

I estimate \( \text{var}(\hat{\alpha}_i) \), \( \text{var}(\hat{\beta}_i) \), \( \sigma \), and \( \text{cov}(\hat{\alpha}_i, \hat{\beta}_i) \) from the OLS in the estimation period. In particular the covariance can be calculated from the regression formulas as

\[
\text{cov}(\hat{\alpha}_i, \hat{\beta}_i) = -\frac{\text{var} \hat{\alpha}_i}{L} \sum_{t=t_1}^{t_2} (\text{Market/Industry Return})_i \quad (12)
\]

where \([e_1, e_2]\) is the estimation window, and \( L \) is the length of the estimation period, i.e., \( L = e_2 - e_1 + 1 \).

After replacing variances and covariances on the right hand side of equation (11) with their OLS estimators I obtain an estimator for the variance of the CARs, which I can substitute in (4). Since the estimation period is long (more than 150 days) I can safely assume that the resulting SCAR has a standard normal distribution (rather than a Student-t distribution).

Finally, I add all the SCARs of the \( n=23 \) companies in the sample and obtain the sum of the normalized cumulative abnormal returns

\[
TSCAR = \sum_{i=1}^{n} \text{SCAR}_i \quad (13)
\]

This sum of normalized cumulative abnormal returns allows us to check the likelihood of the null hypothesis. This checks whether the results are statistically significant. Assuming a normal distribution \( TSCAR \sim N(0, n) \), I can check the likelihood
of obtaining such abnormal returns given the null hypothesis, i.e. given that the event does not produce any abnormal returns and that the excess returns measured are fully attributable to noise.

3. Results
I ran the market tests on a 30 trading-day window [-1,+28], starting a day before the announcement date. I used the applicable industry portfolio for each of the 23 companies that are not classified as Financial Trading companies. The mean Cumulative Abnormal Return for the 30 trading day period was 4.5%, the median was 2.3% and the weighted average CAR\(^{69}\) was WACAR=3.5% (±2%). The results came out statistically significant at the 4% level.\(^{70}\)

4. Robustness
I use a 30 day event window to allow the market to absorb the information about the anticipated destaggering. A side-effect of expanding the event window, however, is that some event windows of different companies overlap. This overlap slightly compromises the robustness of the findings since it increases the likelihood that additional information disclosed during the event window will be taken into account and not be washed out.\(^{71}\)

\[ WACAR = \frac{\sum_{i=1}^{n} \frac{\text{CAR}_i}{\sqrt{\text{var}(\text{CAR}_i)}}}{\sum_{i=1}^{n} \frac{1}{\sqrt{\text{var}(\text{CAR}_i)}}} = \frac{TSCAR}{\sum_{i=1}^{n} \frac{1}{\sqrt{\text{var}(\text{CAR}_i)}}} \]

\(^{69}\) We can think of the denominator in equation (4), the standard deviation of CAR, as an inverse weight. We can therefore define the weighted average CAR according to

\(^{70}\) I do not include here the other results of the study, since they were not statistically significant.

\(^{71}\) Cf. Bhagat and Romano (2002), describing the benefit of conducting event studies on events with different announcement dates.
References


Daines, Robert, Vinay B. Nair, and Lewis Kornhauser. 2005. The Good, the Bad, and the Lucky: CEO Pay and Skill, [ ]


