

Staggered Boards and the Wealth of Shareholders: Evidence from a Natural Experiment

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Abstract

While staggered boards are known to be negatively correlated with firm valuation, such association might be due to staggered boards' either bringing about or merely being the product of the tendency of low-value firms to have staggered boards. In this paper, we use a natural experiment setting to identify how market participants view the effect of staggered boards on firm value. In a recent and not-fully-anticipated recent ruling, the Delaware Chancery Court approved the legality of a shareholder-adopted bylaw that shortened the tenure of directors whose replacement was precluded by a staggered board by moving the company's annual meeting up from August to January. We find that the decision was accompanied by abnormal and economically meaningful positive stock returns to firms with a staggered board, relative to firms without a staggered board.

The identified positive stock returns were especially pronounced for firms likely to be impacted by the decisions, because (i) their past annual election took place in later months of the calendar year, (ii) they are incorporated in Delaware or (iii) do not have supermajority voting requirements that make it difficult for shareholders to amend the bylaws. The identified positive stock returns were also especially pronounced for firms for which control contests are especially relevant because of their (i) below-industry return on assets, (ii) relatively small firm size, and (iii) absence of supermajority voting requirements making a merger of the company difficult.

Our findings are consistent with market participants' viewing staggered boards as bringing about a reduction in firm value. They are thus consistent with the policies of leading institutional investors in favor of proposals to repeal classified boards, and with the view that continuation of the ongoing process of board declassification by many public firms will enhance shareholder value.

Keywords: Corporate governance, staggered boards, takeover defenses, antitakeover provisions, proxy fights, Tobin's Q, firm value, agency costs, Delaware, chancery court

JEL Classifications: G30, G34, K22

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1. Introduction

The existence of governance provisions that weaken shareholder rights and insulate directors from removal is now well known to be negatively correlated with firm value (Gompers, Ishii, and Metrick (2004)). This correlation is partly driven by staggered board provisions, which prevent shareholders from removing a majority of directors in any given election (Bebchuk and Cohen (2005), Bebchuk, Cohen, and Ferrell (2009)). It might be suggested, however, that such correlation does not imply causation, and that it might be fully driven by the tendency of firms with low value and weak performance to have entrenching provisions in general and staggered boards in particular. In this paper we seek to contribute to understanding the correlation between entrenching provisions and firm value by studying stock market reactions in a quasi- experiment – a court ruling weakening the extent to which staggered boards can prevent shareholders from replacing a majority of directors. Consistent with the hypothesis that staggered boards are viewed by the market as bringing about a reduction in firm value, we find that the ruling was accompanied by positive abnormal returns to stockholders of firms with staggered boards, especially firms more likely to be impacted by the decision.

When a board is staggered, only one third of the board is comes up for election in each annual meeting, and thus shareholders cannot replace a majority of the board in any shareholder meeting. Thus, when a staggered board is present, a challenger in a proxy fight, or a hostile bidder seeking to gain control over the board to redeem a poison pill and enable its offer to proceed, would have to win votes in two consecutive shareholder meetings. Such impediments to board replacement could lead to increased slack and thereby worsen firm performance and lower firm valuation.

Over time, institutional investors have become increasingly opposed to staggered boards. While shareholders were willing to vote for the adoption of a staggered board during the 1980s, they subsequently have not been willing to do so and, furthermore, have been increasingly willing to support shareholder proposal to dismantle staggered boards. According to Georgeson reports, there were 187 shareholder proposals to declassify boards during the five proxy seasons from 2006 through 2010, and the average percentage of votes cast in favor of proposals to declassify exceeded 65% in each of these five years. Many of the shareholder proposals to declassify boards cite to the academic evidence on the relationship between staggered boards and firm value.

The Council of Institutional Investors,¹ and leading institutional investors such as CalPERS, TIAA-CREF, Fidelity, Vanguard, and BlackRock,² all have policies that support annual election of all directors. ISS, a leading proxy advisor, similarly has a policy in favor of proposals to dismantle staggered boards.

Facing such widespread shareholder opposition to staggered boards, many companies have declassified their board of directors. According to FactSet Research Systems, between 2000 and 2009, the number of S&P 500 companies with classified boards declined from 300 to 164. Still, the debate over staggered boards is far from being won by shareholders opposed to staggered boards. Many companies continue to oppose proposals to de-stagger their board.³ Moreover, about half of the publicly traded companies in the over 3,000 public companies whose takeover defenses are tracked by FactSet Research Systems still have staggered boards.

¹ Cite to CII policies.

² Cite to proxy voting guidelines.

³ Cite to boards' opposing statements to proposals to repeal classified boards in companies' 2010 proxy statements.

We seek to contribute to understanding the causal effects of a staggered board. Causal identification is notoriously difficult in empirical work on corporate finance and corporate governance. We use a quasi-experimental research design, focusing on the effects of a not-fully-anticipated court ruling. In particular, we focus on the October 8, 2010 ruling by Chancellor Chandler of the Delaware Chancery Court in the takeover battle between Airgas Inc. (“*Airgas*”) and Air Products and Chemicals, Inc. (“*Air Products*”). The court case focused on a novel method for reducing the extent to which a staggered board protects directors from replacement by shareholders – passing a shareholder-adopted bylaw moving up the date of next calendar year’s annual meeting to January and thereby shortening the tenure of directors otherwise protected from replacement by a staggered board. Chancellor Chandler ruled that such bylaws are legally valid and may be used.

Our empirical evidence supports the hypothesis that market participants view the presence of staggered boards to negatively affect firm value. We find that, relative to companies without a staggered board, companies with a staggered board experienced positive and statistically significant abnormal stock returns. Adjusting for the Fama-French-Carhart four factors as standard, companies with staggered boards rose on average by 39 basis points in the first two trading days after the ruling. (We focus on this window because the first trading day was Columbus day, which has an abnormally low trading volume.) These returns were drifted upwards during the five days following the ruling, as the market was digesting the implications of the ruling; adjusting for the standard risk factors, and relative to firms without a staggered boards, firms with a staggered board rose by 50 basis points during this five-day window. Our results are robust to controlling for industry fixed effects.

We also test to see which subsets of firms were expected by the market to be mostly affected by the *Airgas* ruling's weakening of the insulating force of staggered boards. We find evidence that the pattern of positive returns to firms with staggered boards is more pronounced among firms likely to be more impacted by the decisions because (i) their past annual election took place in later months of the calendar year, (ii) they are incorporated in Delaware (and are thus certainly governed by Delaware case law, (iii) they do not have supermajority voting requirements that make it difficult for shareholders to amend the bylaws. Furthermore, we find that the positive stock returns to firms with staggered boards are more pronounced for firms for which control contests are more relevant because of (i) below-industry return on assets, (ii) relatively small firm size, or (iii) absence of supermajority voting requirements making a merger of the company difficult. Constructing a firm-specific Impact Score based on the above five characteristics, we find that the abnormal returns to firms with a staggered board following the *Airgas* ruling significantly increased with each firm's Impact Score.

Overall, our findings are consistent with market participants' expecting the elimination of staggered boards to produce gains to shareholders. The findings are thus consistent with the large support among institutional investors for proposals to repeal classified boards, and with the view that continuation of the process of board declassification taking place during the past decade can be expected to serve shareholders. It should be noted that the identified abnormal positive returns following the *Airgas* ruling are likely to understate the market's estimate of the benefits of repealing classified boards because (i) the market might have ascribed a positive probability to such a ruling and such expectations might have been already built into market prices prior to the ruling, and (ii) the bylaws rendered legal by the *Airgas* ruling reduce limit but not eliminate the

ability of staggered boards to delay the removal of directors whose replacement is desired by a shareholder majority.

Our work seeks to contribute to the existing body of empirical work on staggered boards. Focusing on a sample of hand-collected targets of hostile takeovers, Bebchuk, Coates, and Subramanian (2002a, 2002b) found that, among takeover targets, those with classified boards are associated with lower gains to shareholders. Examining the 1,500+ public firms in the IRRC dataset, Bebchuk and Cohen (2005) subsequently showed that classified boards are associated with lower firm valuation as proxied by Tobin's Q. Subsequently, Masulis, Wang, and Xie (2007) then found that firms with classified boards are more likely to be associated with value-decreasing acquisition decisions; and Faleye (2007) reported that classified boards are associated with lower sensitivity of compensation to performance and lower sensitivity of CEO turnover to firm performance. Bates, Becher and Lemmon (2008) reported that classified boards have a positive correlation with higher takeover premiums, but this study also reports that classified boards are associated with a lower likelihood of an acquisition, and confirms, consistent with earlier work, that classified boards are overall associated with lower firm valuation. We seek to contribute to this body of work by using a quasi-experimental setting to study whether the identified correlation between staggered boards and lower firm value is partly driven by staggered boards bringing about a lower firm value.⁴

⁴ Bebchuk and Cohen (2005) explore the causality issue by using staggered boards in 1990 as an instrument, getting evidence consistent with the correlation between staggered boards and lower firm value being at least partly driven by staggered boards' operating to reduce firm value. This evidence is offered as being merely suggestive on the causality issue, however, with more work on the subject needed.

We also wish to note the results of Guo, Kruse, and Nohel (2008), who find positive stock market reactions to announcements by management on intentions to de-stagger boards. While their results are consistent with ours, it is difficult to draw causal inferences from their findings because management's

Our study also builds on the event study literature using stock price reactions to study the wealth effects of regulatory changes, beginning with Schwert (1981) (see MacKinlay (1997) for a review of the application of event studies to economics and finance, and Bhagat and Romano (2002) for a survey of such applications in corporate law). We add to the work seeking to use event studies to identify the effects of changes in governance arrangements.⁵ The challenges facing event studies of governance changes are now well-understood: event studies focusing on governance changes adopted by companies bundle together the market's assessment of the changes with the market's inferences concerning the private information that might have led management to make such changes (see, e.g., Binder (1985), Coates (2000)); and events focusing on legislative changes might face the difficulty that information about the change is released to the market gradually over a protracted period of time (e.g., Karpoff and Malatesta (1989)). The event on which the current study focuses provides a good quasi-experimental setting, because (i) it involves an exogenous change, (ii) the change took place at a clear point in time and was not fully anticipated prior to that point in time, and (iii) we have a natural control group (firms without a staggered board) that was not affected by the change.

The remainder of this paper is organized as follows. Section 2 discusses the relevant institutional background, including the Delaware court ruling which is the focus of our analysis. Section 3 describes the data. Section 4 shows that the court decision was accompanied by positive and statistically significant returns to stockholders of firms with staggered boards.

choices to de-stagger are unlikely to be random, may be more likely to be taken by managements that anticipate improvements in firm value that would make them less vulnerable to a control contest in any event, and may thus be a signal to the market about management's private assessments.

⁵ For example, Chhaochharia and Grinstein (2007 and 2009) and Hochberg, Sapienza, and Vissing-Jorgensen (2009) use stock returns to study the effects of the Sarbanes-Oxley Act; and Larcker, Ornazabal, and Taylor (2010) and Becker, Bergstresser, and Subramanian (2010) study stock reactions to events making proxy access for shareholders more or less likely.

Section 5 analyzes which firms were most impacted by the decision and experienced the largest positive stock returns. Section 6 concludes.

2. Staggered Board and the *Airgas* Ruling

2.1: Staggered Boards

A company may have a unitary or a staggered board. In a unitary board structure, all directors stand for election at each annual meeting. By contrast, in a staggered board structure, directors are grouped into (typically three) separate classes, with only one of the classes coming up for re-election at each shareholder annual meeting. A staggered board structure provides incumbents directors with substantial protection from attempts to gain control via either a proxy fight or a takeover bid.

In a proxy fight over a company with a staggered board, a challenger would not be able to gain control of the board in one annual meeting but would need to win a shareholder vote in two consecutive shareholder meetings. Thus, even a competing team that is viewed as superior by shareholders would face a substantial delay in its attempt to gain control. Furthermore, the prospect of a board that is bitterly split in the period between the two shareholder meetings might discourage some shareholders from voting for a challenger they would support if a clean-cut transition were possible.

Staggered boards also provide substantial protection against hostile bidders because, following the development of the poison pill, a hostile bidder can prevail over incumbent opposition only by getting shareholders to replace the majority of the incumbent directors. U.S. law has developed during the 1980s and early 1990s to allow incumbents to adopt and maintain poison pill plans that, as long as they are in place, make it prohibitively expensive for a bidder to

purchase a large block. As a result, the only route left to hostile bidders is to place an attractive offer on the table and persuade shareholders to replace the incumbents with a slate of directors receptive to the acquisition bid, typically nominated by the bidder itself. Once elected, such a slate of director would redeem the poison pill and make the acquisition possible. Thus, a hostile takeover requires a ballot box replacement of a majority of directors and is thus made more difficult by the presence of a staggered board. In the presence of a staggered board, no matter how attractive the bidder's offer is, the bidder would have to win shareholder votes in two consecutive meetings. In fact, the evidence indicates that takeover targets are substantially more likely to be able to fend off a hostile takeover bid and remain independent when their board is staggered (Bebchuk, Coates, and Subramanian 2002).

2.2. The *Airgas* Bylaw and the *Airgas* Ruling

The takeover battle that has led to the ruling on which we focus has been waged for over a year, and a good account of it can be obtained from a series of *Deal Professor* columns written for the *New York Times online* by Professor Steven Davidoff.⁶ The saga began in October 2009, when *Air Products* expressed an interest in acquiring *Airgas*. *Air Products* made three bids over the following four months but was rejected each time by *Airgas*' board of directors. In February

⁶ See Davidoff, "Can Airgas Ride Out Air Products' Gale?," *NY Times online*, February 8, 2010; Davidoff, "What was the Airgas Chief Thinking," *NY Times online*, February 12, 2010; Davidoff, "The Way Forward for Airgas," *NY Times online*, March 19, 2010; Davidoff "The Air Products-Airgas Battle Heats Up," *NY Times online*, May 14, 2010; Davidoff, "Airgas Rolls the Dice in Proxy Fight," *NY Times online*, August 30, 2010; Davidoff, "Airgas's Novel Question," *NY Times online*, September 1, 2010; Davidoff, "After Losing Vote, What's Next for Airgas?," *NY Times online*, September 16, 2010; Davidoff, "Air Products Wins Round in Battle With Airgas," *NY Times online*, October 8, 2010; Davidoff, "The Dwindling Options for Airgas," *NY Times online*, October 11, 2010; Davidoff, "Airgas's Strategic Blink," *NY Times online*, October 28, 2010.

of 2010, *Airgas* rejected *Air Products*' \$5 billion, all-cash tender offer to acquire 100% of *Airgas*' shares.⁷

Facing the opposition of *Airgas*' board, *Air Products* proceeded to a proxy fight at *Airgas*' shareholder meeting in September 2010. Because *Airgas* has a staggered board, only one-third of *Airgas*' nine directors came up for re-election at the meeting. With a majority of *Airgas*' shareholders seemingly supportive of its acquisition attempt, *Air Products* was able to replace the directors coming up for re-election with three individuals nominated by *Air Products*.

Airgas held its past annual meetings in August, and thus, in the ordinary course of events, *Air Products* would have been expected to have to wait a year to get an opportunity to replace another one-third of *Airgas*' directors and pave the way for an acquisition. In this case, however, *Air Products* made a novel move in takeover battles, which seems to have been first suggested in one of the Professor Davidoff's *Deal Professor* columns.⁸ At the September 2010 annual meeting, *Air Products* obtained majority shareholder approval for a new shareholder-adopted bylaw provision ("the *Airgas* Bylaw"), which specified that the next annual meeting will be held on January 18, 2011, a mere four months after the September 2010 annual meeting.

Airgas went to the Delaware Chancery Court seeking to invalidate the bylaw as being inconsistent with the establishment of a staggered board in *Airgas* charter. The *Airgas* charter states that each class of directors "shall be elected to hold office for a term expiring *at the annual*

⁷ On February 11, Air Products announced an all-cash tender offer at that price for 100% of the Airgas shares for \$60/share, which was again rejected by Airgas. Air Products continued to raise its bid over the next few months, all met with a cool rejection: on July 8, it increased its offer to \$63.50/share; and on September 6, 2010, it again raised its bid to \$65.50/share.

⁸ See Steven M. Davidoff, "The Way Forward for Airgas," *The New York Times DealBook*: <http://dealbook.blogs.nytimes.com/2010/03/19/the-way-forward-for-airgas/>

*meeting of the stockholders held in the third year following the year of their election.”*⁹ *Airgas* argued that this language should be interpreted as implying three-year terms for directors, thereby prohibiting the annual meeting date to be moved up and truncating directors’ terms to two and a half years. *Airgas* warned that interpreting the standard language used in its charter as permitting shareholders to adopt bylaws such as the *Airgas* bylaw would weaken commonly rendered staggered boards. *Air Products* countered that this standard language refers to an annual meeting but does limit shareholders’ ability to move the date of the annual meeting within the year.

2.3. The *Airgas* Ruling

The ambiguity arises from the meaning of “annual” and “year”, and correspondingly the ambiguity in the length of a “full term” for a director. A hearing in the Delaware Court of Chancery took place on Friday October 8th, and after the close of stock markets, Chancellor Chandler issued an opinion that sided with *Air Products* and approved the legality of the *Airgas* bylaw. Chandler stated: “[*Airgas*]’ charter and bylaws are ambiguous as to whether directors’ terms run in accordance with a calendar year or fiscal year. Therefore, under the ‘rule of construction in favor of franchise rights,’ I cannot read the word ‘fiscal’ into the charter, and must instead construe the ambiguous terms against the board, which leads to my conclusion that *Airgas*’ annual meeting cycle can validly run on a calendar year basis and still be consistent with the charter.”¹⁰

⁹ *Airgas Inc. Certificate of Incorporation (“Certificate”), Article 5, § 1.*

¹⁰ *Airgas, Inc. v. Air Products and Chemicals, Inc., Chancellor Chandler, opinion*

The *Airgas* ruling has implications for the many companies other than *Airgas* which have a staggered board defined using the same standard language as used in *Airgas*' governing documents. Under this ruling, shareholders of such companies would be able to replace a majority of directors in two votes separated by a period shorter than one year. This would not render such staggered boards completely ineffective but would reduce their effectiveness in insulating directors from removal.

It appears that Chancellor Chandler's ruling was not fully anticipated by the market. Indeed, during Friday, October 8, at the time of the hearing in the Chancery Court, there was a downward movement in the stock price of *Airgas*, which was attributed by a *Deal Professor* column covering the hearing to market participants ascribing an increasing likelihood of an *Airgas* victory due to certain remarks made by the Chancellor.¹¹ That the ruling was not fully anticipated by the market is evident from the immediate post-ruling change in *Airgas*' stock price. *Airgas* stock price rose sharply by 2.7% at the very beginning of the first trading day (October 11, 2010) after the ruling was announced on the preceding Friday evening.

The not-fully-anticipated nature of Chancellor Chandler's ruling gives rise to a natural experimental setting that is useful for studying the market participants' view on the impact of staggered boards on firm valuation. The ruling affected one group of firms (the treatment group of firms with staggered boards) but not other firms. Because the ruling makes staggered boards less effective in delaying the replacement of directors by a shareholder majority seeking such a replacement, the ruling provided an exogenous shock that weakened the effects staggered boards have on firm value. Thus, a finding that the ruling was accompanied by positive abnormal stock

¹¹ See Professor Steven Davidoff's post-ruling commentary: <http://dealbook.blogs.nytimes.com/2010/10/11/the-dwindling-options-for-airgas/>

returns to firms with staggered boards would be consistent with the markets' viewing the effects of staggered boards on firm valuation to be negative.

It should be noted that the stock market reactions accompanying the decision would provide an under-estimate of the effect of staggered board as estimated by the market for three reasons. First, while the *Airgas* ruling was not fully anticipated, the market presumably attributed some positive probability to such a ruling, which one widely read commentator suggested as likely.¹² Second, the ruling was expected to be appealed to the Delaware Supreme Court, and thus was not absolutely certain to remain in force. Third, the ruling would merely weaken the antitakeover force of staggered boards rather than eliminate it. For each of these three reasons, to the extent that the ruling is accompanied by increases in the stock prices of firms with staggered boards, these increases represent only part of the benefits estimated by market participants to flow from eliminating board classification in these firms.

3. Data and Summary Statistics

We gather data on corporate governance characteristics, in particular the presence of a staggered board, from the Shark Repellent dataset of FactSet research Systems. The data is available on a cross-section of U.S. based firms listed on NYSE, NYSE AMEX, NYSE ARCA, NASDAQ, or NASDAQ Capital Market.¹³

We merge in data on October 2010 stock prices and returns from Datastream, and PERMNO identifiers and historical returns from CRSP. Finally, we obtain GVKEY identifiers,

¹² See Davidoff's two related blog posts in the New York Times *DealBook*: <http://dealbook.blogs.nytimes.com/2010/09/01/airgas-novel-question/> and <http://dealbook.blogs.nytimes.com/2010/09/16/after-losing-vote-whats-next-for-airgas/>

¹³ Shark Repellent data current as of October 12, 2010.

GICS industry classification, and most recently available annual financial statement information from Compustat. Throughout the paper we use 6-digit GICS industry classification, which has been shown to better explain stock return co-movements and cross-sectional variation in key financial ratios such as valuation multiples (e.g., see Bhojraj, Lee, and Oler (2003)), and therefore provides a better classification system to form industry comparison groups. However, using the Fama-French 48 industry definitions does not substantively change the results of this paper.

The intersection of the four aforementioned datasets yields a sample of 3,216 firms. For our empirical analysis, we follow the governance literature (GIM 2003; BCF 2009; BCW 2010) and exclude all dual-class firms and real estate investment trusts (REITS)¹⁴ since they operate under unique corporate governance arrangements; we also exclude all firms in which insider equity ownership exceeds 50%, for whom staggered boards and the October 8th decision bears the least relevance. Our final sample consists of 2,631 firms.

Table I reports summary statistics on our sample of firms, and compares the characteristics of firms with and without SB. Our sample is evenly split between firms with SB (47%) and firms without SB (53%). A higher percentage (52%) of firms without SB belongs to the S&P 1500 compared to the proportion of firms with SB belonging to the index (45%); accordingly, the average market capitalization of no SB firms (\$6.6 billion) exceeds that of SB firms (\$2 billion), although there is substantially higher variation in the market capitalization among the no SB firms. Finally, SB firms on average have a lower book-to-market ratio of 0.44 compared to the 0.50 of no SB firms. However, this difference is not statistically significant given the large variation around the means.

¹⁴ 4-digit SIC of 6798.

4. Staggered Boards and Announcement Returns

In studying the returns around the announcement of the *Airgas* ruling after the close of market on Friday, October 8th, 2010, we focus on four announcement windows: October 8th to October 11th (T to T+1), October 8th to October 12th (T to T+2), October 8th to October 15th (T to T+5), and October 8th to October 22th (T to T+10). The first trading day of Monday, October 11th, was Columbus Day, when trading volumes are unusually low¹⁵, and our primary focus will thus be on the two trading-day window ending on October 12th. Because markets may not adjust instantaneously to new information (e.g. Bernard and Thomas 1989), we also consider longer horizon windows, ending on October 15th and October 22nd, to account for the possibility that the market required some time to fully process the *Airgas* decision and fully impound value-relevant information into stock prices.

Table I also reports summary statistics of the announcement window returns for SB and no SB firms; all returns are reported in basis points. Across the four windows considered, we find a consistent pattern that SB firms on average outperformed no SB firms. While these summary statistics are suggestive, they do not test for whether the mean announcement returns between SB and no SB firms are meaningfully different.

In Table II Panel A columns (1)-(4) we test for the statistical significance of these differences in average announcement window returns by regressing returns on an indicator variable for SB firms. To account for industry level correlation in returns, we cluster all standard errors by 6-digit GICS industry classification. In general, we find strong evidence that the raw returns around the *Airgas* ruling are statistically higher for SB firms compared to no SB firms.

¹⁵ For example, in the NYSE October 8th total dollar trading volume (\$21.4 billion) is 80% and 81.6% of the previous and the next trading day's total dollar trading volumes, respectively, and 79.3% and 75.8% of the two succeeding Mondays' total dollar trading volumes.

The difference in the mean returns to SB firms is monotonically increasing as we widen the announcement windows, from 15.44 basis points to 36.78 basis points, 50.29 basis points, and 56.52 basis points over the (T,T+1), (T,T+2), (T,T+5), and (T,T+10) windows, where the difference is statistically significant at the 15%, 1%, 1%, and 10% levels, respectively.

We note that any differences in returns between SB and no SB firms we document may be potentially attenuated by two factors: first, the extent to which the *Airgas* ruling was anticipated by the market; second, the extent to which the ruling is expected by the market to be reversed by the Delaware Supreme Court. As discussed earlier, the ruling came as a surprise to the market and renders the first explanation an unlikely possibility. The second explanation seems possible, although there's some evidence suggesting that, after the October 8th ruling, the markets viewed the possibility of being overturned to be slim, "absent a miracle".¹⁶

It is possible that there exist fundamental differences between SB and no SB firms in their sensitivities to pricing risk factors, and these risk factor sensitivities could be driving the observed differences in mean announcement window returns. We therefore compute risk-adjusted excess announcement window returns in two steps as follows. First, each firm's loadings on the Fama-French (1993) three factors and the Fama-French (1996) UMD momentum factor are estimated using the most recently available 120 trading days' data ending on or prior to June 30th of 2010. Second, excess announcement window returns are obtained by taking the residuals from a cross-sectional regression of raw announcement window returns on the estimated factor sensitivities. Columns (5)-(8) of Table II Panel A reports results from regressions of excess announcement window returns on the SB firm indicator. These results are consistent with and generally stronger than those using raw unadjusted returns: compared to no

¹⁶ See <http://dealbook.blogs.nytimes.com/2010/10/11/the-dwindling-options-for-airgas/#more-299565>

SB firms, SB firms' mean excess announcement returns are higher by 17.1, 39.0, 49.7, and 60.6 basis points over the (T,T+1), (T,T+2), (T,T+5), and (T,T+10) windows, where the difference is statistically significant at the 10%, 1%, 1%, and 10% levels, respectively.

To control for the possibility that the returns are driven by other industry-specific factors, we re-run the estimations above but include industry fixed effects, allowing us to make within-industry comparisons. Results reported in Panel B of Table II show that the inclusion of industry fixed effects does not substantially change our results, both in terms of the magnitudes of the coefficients as well as the coefficients' statistical significance, and in fact marginally increases both. SB firms outperformed no SB firms in mean raw (excess) returns by 17.9 (18.7), 44.8 (45.4), 60.4 (59.5), and 60.8 (64.5) basis points over the (T,T+1), (T,T+2), (T,T+5), and (T,T+10) windows, where the difference is statistically significant at the 10% (5%), 1% (1%), 1% (1%), and 10% (5%) levels, respectively.

Consistent with the view that the market requires some time to evaluate and impound new information into prices, the differences in mean returns between SB and no SB firms are increasing as the announcement window widens from (T,T+1) to (T,T+2), and again from (T,T+2) to (T,T+5). From (T,T+5) to (T,T+10) the coefficients on the SB firm indicator stabilize, but are accompanied by a large jump in standard errors across all specifications considered. This pattern is consistent with the view that the markets have sufficiently impounded value relevant information from the *Airgas* ruling into prices in approximately one trading week, and returns in the second week following the decision is simply adding noise. To summarize, Table II provides strong evidence that the *Airgas* decision, which reduced the effectiveness of SBs as an anti-takeover device, increased on average the value of SB firms.

As a robustness check, we test how different our observed differences in announcement window returns are different from non-event days. It is possible, for example, that our regression specifications do not fully account for the differences in risk characteristics between SB and no SB firms and the observed higher mean returns for SB firms over the October 8th event windows is simply a reflection of such differences. To test for this possibility, we re-run for each trading day of 2010 until June 30th the above estimations of Table II. Specifically, for each day we estimate each firm's Fama-French three factor and UMD momentum factor loadings using returns data from 140 to 20 trading days prior. Using these factor sensitivities, we compute excess returns as before over the return windows (T,T+1), (T,T+2), (T,T+5), and (T,T+10). Finally, for each day and each return window period we run the four regression specifications of Table II: using raw and excess returns as the dependent variable, with and without industry fixed effects. The resulting empirical distributions for the SB coefficients provide a basis for evaluating whether the October 8th event window returns are in fact extraordinary.

Figure I presents the non-parametric Epanechnikov kernel density estimates of the non-event SB coefficients. We focus our attention to the (T,T+2) event window, and present the distributions for each of the four empirical specifications, raw or excess returns and with or without industry fixed effects, in the same row¹⁷. We first note that the empirical distribution of the SB coefficients does not support the hypothesis of a normal difference in returns between SB and no SB firms, i.e. during non-event days. In fact, our simulated distribution is approximately normal and centered around 0. The dotted vertical line on each graph represents the location of our observed coefficients estimated from the October 8th event windows. In all four specifications, our observed coefficients lie outside the 99% confidence interval, raising doubts

¹⁷ Figures constructed using the alternative event windows yield almost identical results.

that our results reflect normal differences in returns between staggered and non-staggered boards. In other words, our observed higher mean returns to SB firms over the October 8th event windows is unlikely to arise from normal sampling variation, and is consistent with the weakening of the effectiveness of SB's improving the value of SB firms.

5. Identifying which Firms were Most Affected

5.1. Potentially Relevant Firm Characteristics

We now turn to examine among which subset of firms the announcement returns to SB firms are most concentrated. We expect the October 8th decision to affect the subset of firms for whom the *Airgas* ruling should have the greatest impact.

First, firms that used to hold their annual meeting toward the end of the calendar year can be expected to be more affected by the ruling than firms which used to hold their annual meeting earlier in the calendar year. Recall that the bylaw whose legality was approved by the *Airgas* litigation moves the annual meeting to January. Such a bylaw could substantially shorten the term of directors who would otherwise come up for re-election toward the end of the calendar year, but would have little practical impact on directors who would in any event come up for reelection early in the calendar year.

Second, since the October 8th ruling is a ruling on Delaware corporate law, we expect the announcement returns to be more concentrated around firms incorporated in Delaware. While courts in other jurisdictions often follow Delaware precedents, which thus are likely to have an effect also on firms incorporated in states other than Delaware, the applicability of a Delaware court ruling to companies incorporated in Delaware is more direct and certain.

Third, we also expect the announcement returns to be more concentrated around firms with no supermajority requirements for amending bylaws. Such voting requirements makes it more difficult for a group of shareholders, who wish to facilitate a takeover bid that is impeded by a staggered board, to exploit the *Airgas* ruling by amending the firm's bylaws in order to replace a fraction of its board members at an earlier date.

Fourth, supermajority requirements for mergers render the *Airgas* ruling less relevant. Any acquisition attempts on firms with such requirements must ultimately pass a supermajority voting threshold, even if a blocking slate of directors were successfully replaced.

Finally, we also expect the returns to firms with staggered boards to be more pronounced for firms for which control contests are more relevant. Among other things, the incidence of acquisitions offers is higher for firms with poor operating performance relative to their industry and among firms of smaller size (see, e.g., Bebchuk, Cohen, and Wang (2010)). Accordingly, in our empirical exploration, we analyze whether the positive returns to firms with staggered boards accompanying the *Airgas* ruling were more pronounced for firms whose return on assets (ROA) is below the industry median, firms whose firm valuation as measured by Tobin's Q is below the industry median,¹⁸ and firms whose market capitalization is below the market's median.

Table III summarizes the distribution of the seven characteristics whose association with returns we wish to explore in the large sample of public firms we study:

- . 32% of the firms with staggered boards (and 35% of firms without staggered boards) had their 2009 annual meeting take place in June or a later month in the calendar year;

¹⁸ Following prior work, we use the definition of Tobin's Q in Kaplan and Zingales (1997), who define Tobin's Q as the market value of assets divided by the book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes.

- 65% of firms with staggered boards (and 61% of firms without staggered boards) are incorporated in Delaware;
- 38% of firms with staggered boards (and 70% of firms without a staggered board) have no supermajority requirement for shareholder amendment of the bylaws;
- 76% of firms with staggered boards (and 79% of firms without a staggered board) do not have supermajority voting requirement for a merger;
- 42% of firms with staggered board (and 42% of firms without a staggered board) have an ROA below industry median;
- 47% of firms with a staggered board (and 45% of firms without a staggered board) have a Tobin's Q below the industry median; and
- 40% of firms with a staggered board (and 36% of firms without a staggered board) have a market capitalization below the market's median.

5.2. Firm Characteristics and Announcement Returns

We proceed to explore whether the October 8th *Airgas* ruling announcement returns appear to be more concentrated along the six characteristics described here. Table IV reports the differences in mean announcement window excess returns between SB and no SB firms by different firm characteristics. While this table reports results for the (T,T+2) announcement window, using other windows does not change the results qualitatively. We first explore the patterns in excess returns on the basis of the applicability and relevance of the October 8th ruling.

Consistent with our expectations, we find the differences in mean excess returns to be more pronounced in firms that held their 2009 annual meeting in June or later; among such firms, firms with staggered boards outperformed firms without a staggered board by 72.04 basis

points over the two-day window, a difference that is statistically significant at the 5% level. In contrast, among firms that held their 2009 annual meeting during the January-May part of the year, those with a staggered board outperformed those without SB's by 23.97 basis points, but the difference is not statistically distinguishable from 0 at the 10% level.

We also find the differences in mean excess returns to be more pronounced in Delaware incorporated firms. Among firms incorporated in Delaware, those with a staggered board outperformed those without a staggered board by 48.27 basis points over the two-day window, a difference that is statistically significant at the 5% level. In contrast, among non-Delaware firms, those with a staggered board outperformed those without a staggered board by 20.78 basis points, but the difference is not statistically distinguishable from 0 at the 10% level.

Comparing those firms with and without supermajority requirements for amending bylaws, we find the excess returns differentials between firms with and without a staggered board to be more pronounced in those firms without such requirements, as expected. Among firms with no supermajority requirements to amend bylaws, SB firms' mean excess returns exceeded that of no SB firms by 44.9 basis points, a statistically significant difference at the 5% level. Among firms with supermajority bylaw requirements, SB firms' mean excess returns exceed those of no SB firms by 40.83 basis point, a difference that, while similar in magnitude, is not statistically different from 0 basis points at the 10% level.

Finally, in comparing those firms with and without supermajority requirements for approving mergers, we find that the excess returns differentials between SB and no SB firms to be more pronounced in those firms without such requirements, as expected. Among firms with no supermajority requirements to approve mergers, SB firms' mean excess returns exceeded that of no SB firms by 45.8 basis points, a statistically significant difference at the 5% level. Among

firms with supermajority merger requirements, SB firms' mean excess returns exceed those of no SB firms by 24.09 basis point, a difference that is not statistically different from 0 at the 10% level.

Next we explore the patterns in excess returns along the dimensions of firm characteristics most likely to affect takeover likelihood, all else equal. Among firms with below industry median ROA, mean announcement returns to SB firms exceed those of no SB firms by 64.87 basis points, a statistically significant difference at the 5% level. In contrast, among firms with above industry median ROA, this difference reduces to 20.19 basis points and is not statistically distinguishable from 0 at the 10% level.

Moreover, we find that among firms with above industry median Tobin's Q, the mean announcement returns for SB firms exceed those of no SB firms by 38.57 basis points. As for firms with above industry median Q, while we find a marginally higher mean difference in excess returns for SB firms at 38.65 basis points, we do not find this difference to be statistically different from 0 at the 10% level.

Finally, we find a pronounced result along the size dimension. Among firms with below median size, SB firms' announcement returns exceeded no SB firms' by 80.37 basis points, significant at the 5% level, compared to 12.83 basis points among above median size firms, a difference that is not statistically significant at the 10% level. With the exception of Tobin's Q, our results suggest that the difference in excess returns between SB and no SB firms are concentrated along those firm characteristics associated with a higher takeover likelihood, all else equal.

5.3 Announcement Returns and the Impact Score

Given our summary findings above, we proceed to construct an Impact Score in order to measure the expected degree of impact of the October 8th ruling. The Impact Score is constructed as the sum of the following six indicator variables: whether a firm's 2009 annual meeting took place in June or later month; whether the firm has no supermajority voting requirements to amend bylaws; whether the firm has no supermajority requirement for shareholder adoption of bylaws; whether the firm has no supermajority requirement for a merger; whether the firm's ROA is below the industry median; and whether the firm has market capitalization below the market's median. We do not use Tobin's Q in the design of the Impact Score due to the fact that our summary statistics do not reveal a substantial pattern and also because another firm performance measure, namely industry relative ROA, reveals a more pronounced concentration of excess returns. However, adding Tobin's Q to the Impact Score, making it based on seven rather than six elements, does not change the nature of our results.

Table V reports the distribution of Impact Score in our data. A majority of firms (~75%) have Impact Scores of 2, 3, or 4, while a small proportion of firms have 0, 1, 5 and 6, at 2.0%, 8.59%, 11.21% and 3.38%, respectively. In Table VI we test whether the difference in excess returns between SB and no SB firms are more pronounced in firms with higher Impact Scores.

In Table VI we regress excess announcement window returns on the SB indicator, Impact Score, an interaction between SB and Impact Score, and include 6-digit GICS industry fixed effects. In all four announcement windows considered, we find the SB coefficients to be statistically indistinguishable from 0 at the 10% level, indicating that there is no difference in excess returns among those firms with Impact Scores of 0. Similarly, there is no difference in mean excess announcement returns among firms of different Impact Scores, as the coefficient on

the Score is statistically insignificant at the 10% in across all four announcement windows. The interaction term is positive and statistically significant for the (T,T+1), (T,T+2), and (T,T+5) windows (at the 15%, 5%, and 5% significant level respectively), and is positive but not statistically significant for the (T,T+10) window. For example, over the (T,T+2) window, a 1 unit increase in the score yields an average difference in excess returns between SB firms and no SB firms of 33.04 basis points, a statistically significant difference at the 5% level; this implies that among firms with the highest Impact Score of 6, SB firms outperform no SB firms by an average of 198 basis points. Overall, Table V results show strikingly that the October 8th ruling had the greatest impact among those SB firms for whom the ruling is more relevant and those firms who, all else equal, face the highest takeover likelihood.

6. Conclusion

This paper has sought to contribute to understanding the sources of the well-documented correlation between governance provisions insulating directors from removal and lower firm value. We have used a natural experiment – a recent Delaware Chancery Court ruling enabling shareholders to weaken the extent to which staggered boards insulate directors from removal – to identify how markets view the effect of staggered boards on firm value. We find that the ruling was accompanied by statistically significant positive abnormal returns to shareholders of firms with staggered boards, relative to those without staggered boards. The positive relative stock returns were especially significant for firms likely to be impacted by the decisions (because they are incorporated in Delaware or have certain other governance features) or have financial characteristics (low RO, low Q, or small size) that make control contests more relevant for them. Our findings are consistent with market participants' viewing staggered boards as bringing about

a reduction in firm value. Thus, our findings are consistent with the view that the ongoing process of dismantling staggered boards, encouraged by institutional investors, could well contribute to increasing shareholder wealth.

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Figure I

Figure I displays the non-parametric Epanechnikov kernel density estimates of non-event SB coefficients for each announcement window. Non-event SB coefficients are obtained as follows: for each trading day of 2010 until June 30th, regress 1-day, 2-day, 5-day, and 10-day returns. Specifically, for each day we estimate each firm's Fama-French three factor and UMD momentum factor loadings using returns data from 140 to 20 trading days prior. Using these factor sensitivities, we compute excess returns as before over the return windows $(T,T+1)$, $(T,T+2)$, $(T,T+5)$, and $(T,T+10)$. Finally, for each day and each return window period we run the four regression specifications of Table II Panel B, using (Fama-French-Carhart) risk-adjusted announcement returns as dependent variables and including 6-digit GICS industry fixed effects. For each day we estimate each firm's Fama-French three factor and UMD momentum factor loadings using returns data from 140 to 20 trading days prior. Using these factor sensitivities, we compute excess returns as before over the return windows $(T,T+1)$, $(T,T+2)$, $(T,T+5)$, and $(T,T+10)$, by taking the residuals from a cross-sectional regressions of raw returns on the estimated factor loadings. Finally, for each day we estimate the mean differences in excess returns over each return window by regressing excess returns on the SB indicator.

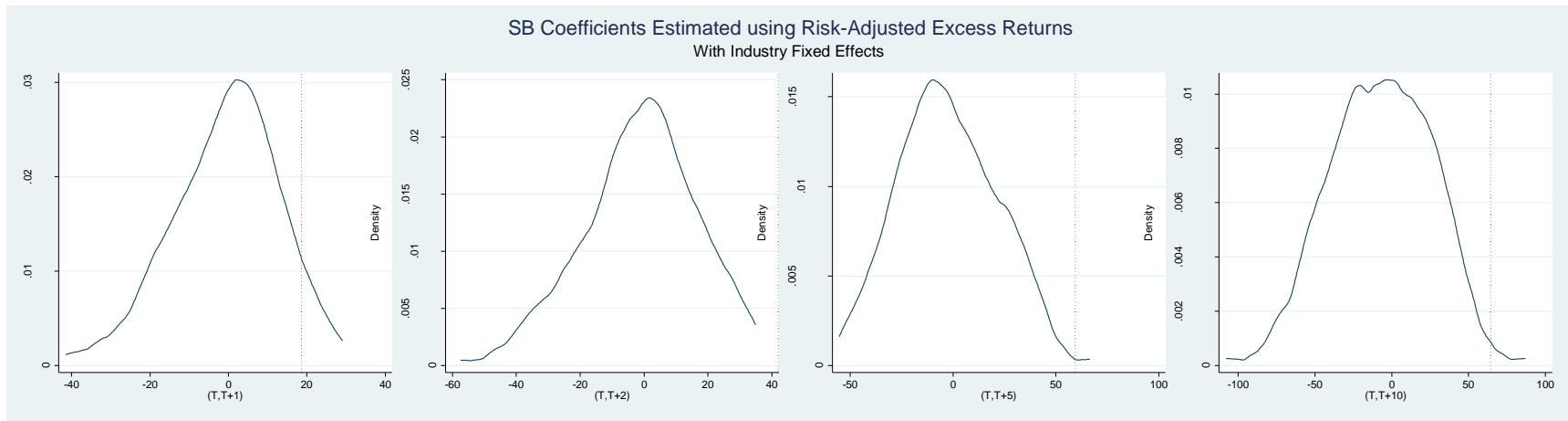


Table I: Summary Statistics

Table I reports summary statistics for the sample used in the paper, for all firms and by firms with and without staggered boards. Our base dataset comes from Shark Repellent, and consists of all U.S. based firms listed on NYSE, NYSE AMEX, NYSE ARCA, NASDAQ, or NASDAQ Capital Market, and exclude all dual-class firms, all real estate investment trusts (REITS, SIC = 6798), and all firms with insider equity ownership exceeding 50%. We obtain October stock returns from Datastream, historical returns from CRSP, and GICS and annual financial statement information from Compustat, resulting in a final sample of 2,631 observations. Market capitalization is taken from the most recently available annual financial statements, and book-to-market ratio is defined to be the book value of (tangible) common equity (item CEQT) net of deferred taxes and investment tax credit (item TXDITC) divided by the market value of equity. Summaries of raw announcement returns are reported from the close of October 8, 2010 (T), to the close of October 11 (T+1), October 12 (T+2), October 15 (T+5), and October 22 (T+10). Where applicable, standard deviations are reported in parentheses.

Variables	All Firms	S-Board	No S- Board
# Observations	2,631	1,239	1,392
% of Companies	100%	47%	53%
% S&P 1500	48%	45%	52%
Market cap (\$Mil)	4,399 (17,184)	1,957 (4,693)	6,566 (22,979)
Book to Market	0.47 (1.14)	0.44 (1.30)	0.50 (1.30)
Returns (T,T+1)	-5.78 (263.1)	2.39 (257.0)	-13.06 (268.3)
Returns (T,T+2)	43.00 (388.6)	62.45 (400.0)	25.68 (377.4)
Returns (T,T+5)	148.72 (553.5)	175.32 (537.0)	125.04 (567.0)
Returns (T,T+10)	144.38 (786.5)	174.28 (749.5)	117.76 (817.5)

Table II: Announcement Returns and Staggered Boards

Table II reports results from OLS regressions of October 8th, 2010 *Airgas* ruling announcement returns on indicator variables for SB firms. Four announcement windows are considered: from October 8th to October 11th (T,T+1), October 8th to October 12th (T,T+2), October 8th to October 15th (T,T+5), and October 8th to October 21st (T,T+10). Panel A (Panel B) reports results from regression specifications without (with) industry fixed effects. Columns (1)-(4) use raw announcement window returns as dependent variables, while columns (5)-(8) use Fama-French-Carhart risk-adjusted excess announcement window returns. Excess returns are computed in two steps as follows. First, each firm's loadings on the Fama-French (1993) three factors and the Fama-French (1996) UMD momentum factor are estimated using the most recently available 120 trading days' data ending on or prior to June 30th of 2010. Second, excess announcement window returns are obtained by taking the residuals from a cross-sectional regression of raw announcement window returns on the estimated factor sensitivities. Cluster robust standard errors, clustered at the 6-digit GICS level, appear immediately below the coefficient estimate in parentheses. Levels of significance are indicated by †, *, **, and *** for 15%, 10%, 5%, and 1%, respectively.

Panel A: No Industry Adjustment

	Raw Returns				(Fama-French-Carhart) Excess Returns			
	(1) (T,T+1)	(2) (T,T+2)	(3) (T,T+5)	(4) (T,T+10)	(5) (T,T+1)	(6) (T,T+2)	(7) (T,T+5)	(8) (T,T+10)
S-Board	15.444 [†] (9.53)	36.776*** (12.94)	50.287*** (18.94)	56.523* (30.61)	17.136* (9.47)	38.991*** (12.81)	49.711*** (18.67)	60.614* (30.62)
Cons	-13.06 (11.15)	25.68 [†] (17.25)	125.04*** (31.70)	117.76*** (34.70)	-11.85 (10.22)	-17.86 (15.42)	-20.82 (30.37)	-28.23 (34.90)
FE	No	No	No	No	No	No	No	No
Observations	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631
Adj. Rsq	0.000	0.002	0.002	0.001	0.001	0.002	0.002	0.001

Panel B: Industry Fixed Effects

	Raw Returns				(Fama-French-Carhart) Excess Returns			
	(1) (T,T+1)	(2) (T,T+2)	(3) (T,T+5)	(4) (T,T+10)	(5) (T,T+1)	(6) (T,T+2)	(7) (T,T+5)	(8) (T,T+10)
S-Board	17.874* (9.16)	44.799*** (12.57)	60.442*** (17.52)	60.797* (31.48)	18.659** (9.15)	45.418*** (12.62)	59.495*** (17.20)	64.512** (31.48)
Cons	-14.20*** (4.31)	21.90*** (5.92)	120.26*** (8.25)	115.75*** (14.82)	-12.57*** (4.31)	-20.89*** (5.94)	-25.43*** (8.10)	-30.06** (14.83)
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,631	2,631	2,631	2,631	2,631	2,631	2,631	2,631
Adj. Rsq	0.027	0.022	0.066	0.036	0.023	0.016	0.060	0.037

Table III: Firm Characteristics Distributions -- Firms with and without a Staggered Board

Table III reports pooled averages, by firms with or without staggered boards, for six firm characteristics, coded as binary indicator variables: whether a firm's meeting date is on or after June or not (Meeting Date on or after June), whether or not a firm is incorporated in Delaware (Delaware), whether a firm is without a supermajority voting requirement for amending bylaws (No Super Majority Bylaws), whether a firm is without a supermajority voting requirement for approving mergers (No Super Majority Mergers), whether a firm's ROA is below its 6-digit GICS industry median (Below Industry Median ROA), whether a firm's Tobin's Q is below its 6-digit GICS industry median (Below Industry Median Q), and whether a firm's market capitalization is strictly below the sample median (Below Median Size). Following Kaplan and Zingales (1997), Tobin's Q is defined as the market value of assets divided by the book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes.

Variable	All	S-Board	No S-Board
Meeting Date on or after June	34%	32%	35%
Delaware	63%	65%	61%
No Super Majority Bylaws	55%	38%	70%
No Super Majority Mergers	78%	76%	79%
Below Industry Median ROA	42%	42%	42%
Below Industry Median Q	46%	47%	45%
Below Median Size	38%	40%	36%
Number of Observations	2,631	1,239	1,392

Table IV: Announcement Returns and Staggered Boards in Different Groups of Firms

Table IV reports the differences in mean (Fama-French-Carhart) risk-adjusted excess (T,T+2) announcement window returns between SB and no SB firms across six different firm characteristics, summarized in Table III. Computations of excess returns are as described in Table II. We examine differences in excess announcement returns to SB and no SB firms for: firms whose meeting date is before June versus firms whose meeting date is on or after June, firms incorporated in Delaware (Delaware) versus firms incorporated in other states (Non-Delaware); firms with no supermajority voting requirements for amending bylaws (No Super Major Bylaw) versus firms with such requirements (Super Major Bylaw); firms with no supermajority voting requirements for approving mergers (No Super Major Merger) versus firms with such requirements (Super Major Merger); firms with ROA below their 6-digit GICS industry median (Below Industry Median ROA) versus firms with above industry median ROA (Above Industry Median ROA); firms with Tobin's Q below their 6-digit GICS industry median (Below Industry Median Q) versus firms with above industry median Q (Above Industry Median Q); finally, firms with market capitalization strictly below our sample median (Below Median Size) versus firms with market capitalization above or equal to our sample median (Above Median Size). Standard deviations are reported in parentheses below means. We report the differences in mean excess returns (SB returns – no SB returns) using a standard unpaired T-test. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1%, respectively.

	SB Firms		No SB Firms		Diff	
	Mean	N	Mean	N	Mean	
All	21.13 (11.25)	1,239	-17.86 (10.09)	1,392	38.99	***
Meeting Date before June	1.57 (10.47)	841	-22.40 (12.08)	899	23.97	
Meeting Date on and After June	62.45 (27.04)	398	-9.59 (18.08)	493	72.04	**
Below Median Size	35.45 (15.48)	800	-12.82 (14.04)	849	48.27	**
Above Median Size	-4.96 (14.49)	439	-25.75 (13.70)	543	20.78	
No Super Major Merger	30.10 (20.99)	466	-14.79 (9.80)	978	44.90	**
Super Major Merger	15.72 (12.85)	773	-25.11 (24.84)	414	40.83	
Delaware	33.91 (14.00)	942	-11.17 (12.00)	1,104	45.08	**
Non-Delaware	-19.41 (14.93)	297	-43.50 (16.21)	288	24.09	
Below Industry Median Q	41.86 (22.35)	522	-23.01 (20.42)	583	64.87	**
Above Industry Median Q	6.04 (10.61)	717	-14.15 (9.23)	809	20.19	
No Super Major Bylaw	30.29 (18.16)	585	-8.35 (16.97)	626	38.65	
Super Major Bylaw	12.93 (13.79)	654	-25.63 (12.01)	766	38.57	**
Below Median Size	52.15 (24.37)	492	-28.22 (24.39)	496	80.37	**
Above Median Size	0.70 (9.46)	747	-12.13 (7.98)	896	12.83	

Table V: Distribution of the Impact Score

Table V reports for SB and no SB firms distributional statistics for the Impact Score, constructed as the sum of five indicator variables: whether a firm's meeting date is on or after June or not (Meeting Date on or after June), whether or not a firm is incorporated in Delaware (Delaware), whether a firm is without a supermajority voting requirement for amending bylaws (No Super Majority Bylaws), whether a firm is without a supermajority voting requirement for approving mergers (No Super Majority Mergers), whether a firm's ROA is below its 6-digit GICS industry median (Below Industry Median ROA), and whether a firm's market capitalization is strictly below the sample median (Below Median Size).

Impact Score	All Firms			SB Firms			No SB Firms		
	N	%	Cum	N	%	Cum	N	%	Cum
0	52	1.98	1.98	31	2.5	2.5	21	1.51	1.51
1	226	8.59	10.57	120	9.69	12.19	106	7.61	9.12
2	603	22.92	33.49	326	26.31	38.5	277	19.90	29.02
3	782	29.72	63.21	362	29.22	67.72	420	30.17	59.2
4	584	22.2	85.4	262	21.15	88.86	322	23.13	82.33
5	295	11.21	96.62	114	9.2	98.06	181	13.00	95.33
6	89	3.38	100	24	1.94	100	65	4.67	100

Table VI: Announcement Returns and the Impact Score

Table VI reports results from OLS regressions of October 8th, 2010 *Airgas* ruling announcement excess returns on indicator variables for SB firms, Impact Score, and an interaction between SB and Impact Score. Four announcement windows are considered: from October 8th to October 11th (T,T+1), October 8th to October 12th (T,T+2), October 8th to October 15th (T,T+5), and October 8th to October 21st (T,T+10). Computations of (Fama-French-Carhart) risk-adjusted excess returns are as described in Table II. All specifications include 6-digit GICS industry fixed effects. Cluster robust standard errors, clustered at the 6-digit GICS level, appear immediately below the coefficient estimate in parentheses. Levels of significance are indicated by †, *, **, and *** for 15%, 10%, 5%, and 1%, respectively.

	(1)	(2)	(3)	(4)
	(T,T+1)	(T,T+2)	(T,T+5)	(T,T+10)
Staggered Board (SB)	-25.615 (26.74)	-51.614a (33.46)	-51.125 (53.71)	-29.407 (88.20)
Impact Score	-3.045 (5.47)	-1.307 (8.55)	14.149 (13.30)	0.419 (18.93)
SB X Impact Score	14.797a (10.13)	33.043** (12.66)	39.460** (18.22)	32.176 (29.49)
Cons	-2.675 (17.53)	-16.623 (26.72)	-71.309* (41.98)	-31.395 (60.19)
Fixed Effects	Yes	Yes	Yes	Yes
Impact Score FE	No	No	No	No
Observations	2,631	2,631	2,631	2,631
Adj. Rsq	0.024	0.020	0.067	0.037

	(1)	(2)	(3)	(4)
	(T,T+1)	(T,T+2)	(T,T+5)	(T,T+10)
Staggered Board (SB)	-25.615 (26.74)	-51.614a (33.46)	-51.125 (53.71)	-29.407 (88.20)
Impact Score	-3.045 (5.47)	-1.307 (8.55)	14.149 (13.30)	0.419 (18.93)
SB X Impact Score	14.797a (10.13)	33.043** (12.66)	39.460** (18.22)	32.176 (29.49)
Cons	-2.675 (17.53)	-16.623 (26.72)	-71.309* (41.98)	-31.395 (60.19)
Fixed Effects	Yes	Yes	Yes	Yes
Impact Score FE	No	No	No	No
Observations	2,631	2,631	2,631	2,631
Adj. Rsq	0.024	0.020	0.067	0.037