WHEN ARE STAGGERED BOARDS BENEFICIAL?

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Abstract

We reexamine the negative relation between firm value and staggered boards. We document that firms with characteristics indicating low power to bargain for favorable terms in a takeover, but also indicating high potential agency costs, are more likely to have a staggered board in place. We also find that among these firms, those with staggered boards have higher valuation, as measured by Tobin's Q. This result is robust to various controls for endogeneity. Our evidence suggests that staggering the board is beneficial for certain firms and challenges the commonplace view that board classification is an antitakeover device that necessarily harms shareholders.

JEL Classification: G30; G34; K22

Keywords: Corporate governance, Classified Board, Staggered Board, Antitakeover Provisions, Tobin's Q

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Introduction

A staggered (classified) board is a corporate governance arrangement requiring that the board members are placed into different classes (usually three) and serve overlapping terms. In contrast to a board that is not staggered, directors serving on a staggered board do not stand for elections annually. Each year, only one class of directors is elected for the number of years equal to the number of classes that the board consists of.

Researchers and practitioners largely consider a staggered board to be an effective antitakeover device for at least two reasons. First, because only one class of the board can be replaced each year, an outsider who gains control of a firm (say, via acquiring more than a majority of voting shares in a tender offer) has to wait two or more years to gain control of the board unless incumbent board members decide to resign voluntarily. This delay in assuming full control of the target's board can be prohibitively costly to the acquirer. Second, the presence of a staggered board in a firm that is the target of a hostile takeover can effectively prevent the hostile bidder from acquiring a large block of the target equity because of the board's power to adopt and maintain a poison pill provision [1].

A priori, it is unclear whether staggered boards harm or benefit shareholders. Some argue that staggered boards detract from shareholder wealth because they impede disciplinary takeovers and thereby entrench inefficient managers in their positions. Conversely, others argue that staggered boards increase shareholder wealth because they allow managers to bargain for more favorable terms in a takeover than dispersed shareholders could obtain on their own.

In this paper, we examine the possibility that staggered boards might actually be valuable for certain firms. Specifically, we ask whether there is a type of firm that potentially benefits from having a staggered board in place, and whether having a staggered board is, in fact, beneficial for such firms. In

examining these questions, we re-visit the negative relation between firm value (Tobin's Q) and staggered boards documented in the studies of Bebchuk and Cohen (2005) and Faleye (2007).

Based on findings in Straska and Waller (2010) and prior research, we expect that staggered boards are more common in firms with three characteristics: low managerial ownership, low shareholder concentration, and low relative equity valuation. These firms might adopt staggered boards for two reasons. First, firms with these characteristics have low power to bargain for favorable terms in a takeover. If staggered boards enhance bargaining power, adopting them should benefit shareholders of these firms. In an alternative view, however, firms with these characteristics face high potential agency costs. If staggered boards further entrench inefficient managers by protecting their positions, adopting them should harm shareholders of these firms. In the following, we therefore refer to firms with low managerial ownership, low shareholder concentration, and low relative equity valuation as Potentially Benefitting Firms.

We form two hypotheses to distinguish which effect of staggered boards dominates in the potentially benefitting firms. According to our first hypothesis, firms with low bargaining power adopt staggered boards in an attempt to maximize future takeover premiums. If this is the case, adopting a staggered board should be value-enhancing for these firms. According to our second hypothesis, managers of firms with high potential agency costs propose to adopt staggered board provisions to entrench themselves, and dispersed shareholders, who are uninformed about the provisions' entrenching effects, approve of those proposals. If this is the case, then adopting staggered boards should be value-decreasing for these firms.

We test these hypotheses on the sample of firms from the Investor Responsibility Research Center (IRRC) over the period 1990 - 2003. Using univariate comparisons and regression analysis we examine the relationship between firm value (Tobin's Q) and staggered boards and find that potentially benefitting firms with staggered boards have higher Tobin's Q. This finding persists even after our best attempts to control for endogeneity. This result is contrary to the hypothesis that potentially benefitting firms adopt staggered boards to predominantly entrench managers and it is contrary to the commonplace view that staggered boards are universally harmful to shareholders. Rather, this result indicates that adopting a staggered board provision can be value-enhancing for certain firms.

The conjecture that adopting staggered boards, among other antitakeover provisions, is potentially value-enhancing for some firms is not new. McWilliams (1990) documents that the average market reaction to the proposals to adopt provisions that require shareholder approval (including staggered boards) is positive for firms with low managerial ownership. However, that study aggregates together proposals to adopt various antitakeover provisions and the effect of proposals to adopt staggered board provisions is not measured separately. Recently, the studies of Bebchuk and Cohen (2005) and Faleye (2007) seem to be viewed by many as evidence that having a staggered board in place is value-decreasing for all firms alike. Our empirical design and results, however, provide evidence that the relationship between staggered boards and firm value is more nuanced than these studies, and widespread calls for provision repeals, might suggest.

Our paper adds to the argument in the corporate governance literature that there is no prescribed optimal governance structure that applies to all firms regardless of firm type. In spirit, this paper is most similar to Straska and Waller (2010) or Johnson et al. (2011), who question the conventional wisdom that having more antitakeover provisions in place is necessarily value-reducing or to Coles, Daniel, and Naveen (2008), who question conventional wisdom that larger boards and insider-dominated boards are necessarily value-reducing. The results we present suggest that the conventional arguments regarding staggered boards should also not be universally applied.

The rest of the paper is organized as follows. In the next section, we develop our hypotheses in more detail; in Section 3, we describe the sample; in Section 4, we present univariate results; in Section 5, we provide the results from multivariate analysis; and in Section 6, we conclude.

Literature Review and Hypotheses Development

A. Prior Literature

Early short-term event studies on the wealth effects of adopting staggered board provisions provide mixed results. While some studies document a negative valuation effect around the announcements to adopt staggered boards and other antitakeover provisions (Jarrell and Poulsen, 1987; Bhagat and Jefferis, 1991), others document a positive, or no effect (Linn and McConnell, 1983; DeAngelo and Rice, 1983; Brickley et al., 1988), and still others find that the effect depends on the characteristics of the adopting firms (McWilliams, 1990).

More recent long-term studies, such as Bebchuk and Cohen (2005), Faleye (2007), and Bebchuk et al. (2009) document a strong negative relation between board classification and firm value (Tobin's Q). Additionally, Bebchuk and Cohen (2005) and Bebchuk et al. (2009) present evidence which suggests that staggered boards cause, and not merely reflect, lower firm value. These studies therefore conclude that by protecting managers from removal, staggered boards give rise to agency costs that lower shareholder value.

Some evidence from the impact of staggered boards on the outcomes of corporate takeovers also suggests that staggered boards harm shareholders. For example, Pound (1987) and Bebchuk et al. (2002) find that targets with staggered boards do not receive a higher takeover premium than those without. Furthermore, Masulis et al. (2007) find that firms with staggered boards make worse acquisitions than other firms. While these results suggest that staggered boards are costly to shareholders, more recent evidence suggests that staggered boards do provide some bargaining benefit. Bates et al. (2008) show that while the presence of a staggered board provision lowers the probability that a firm will become a takeover target, conditional on becoming a target, staggered boards are unrelated to ultimate deal completion. They also show that the announcement period stock returns realized by target firms in a takeover are unrelated to whether the target firm has a staggered board but the acquiring firm's announcement returns are negatively related to the target having a staggered board. Bates et al. interpret their findings to suggest that staggered boards do not unequivocally entrench managers but allow target firms to capture more of the surplus value created in the takeover. In another study, Kadyrzhanova and Rhodes-Kropf (2010) show that takeover premiums are higher for target firms with staggered boards, but only in concentrated industries.

Despite the evidence on the potential bargaining benefit of staggered boards, the commonplace view regarding staggered boards seems to be that they are harmful for shareholders. For example, Institutional Shareholder Services (ISS), a leading proxy voting and corporate governance advisory firm advises in its Proxy Voting Guidelines for 2010 (and in previous years) that shareholders should always vote against adopting staggered boards and should always vote for proposals to repeal staggered boards.[2] In addition, in their newly-developed Governance Risk Indicators, ISS lowers the governance score for the companies that have staggered boards, citing the studies of Bebchuk and Cohen (2005) and Faleye (2007) as evidence that staggered boards are value reducing.[3] ISS is not alone in its critique of staggered boards. The proxy voting guidelines of various mutual fund companies including TIAA-CREF and Fidelity Investments also call for voting against the adoption of, and for the removal of, staggered board provisions (Klausner, 2003; Bates et al., 2008). The TIAA-CREF guidelines, for example, note that "A classified board structure, particularly in combination with takeover defenses such as a "poison pill" shareholder rights plan, can be a significant impediment to changes in control."[4]

B. Hypotheses

In this section, we develop the two primary hypotheses that we test. Using terminology from prior studies, we label these hypotheses the "Bargaining Hypothesis" and the "Entrenchment Hypothesis." As documented in Straska and Waller (2010) and in other studies, antitakeover provisions are more commonly adopted by firms with low managerial ownership, low shareholder concentration, and low equity valuation. Because a staggered board provision is an antitakeover provision, we expect (and later confirm) that it also will be more commonly adopted by these potentially benefitting firms.

Looking at firms with these three characteristics is interesting because, a priori, it is not obvious why these firms would be more likely to adopt a staggered board provision. On one hand, these firms can be

viewed as having low power to bargain for favorable terms in a takeover. Theory suggests that antitakeover measures that transfer negotiating power from shareholders to managers can lead to higher takeover premiums in firms with dispersed shareholders (DeAngelo and Rice, 1983) and in firms with low managerial ownership (Harris, 1990; Stulz, 1988). Because staggered boards can cause significant delays in completing (hostile) tender offers, they are among the provisions that encourage potential acquirers to negotiate the deal directly with the board. Additionally, if staggered boards help extract higher premiums (Bates et al., 2008), they can benefit firms with low equity value if these firms are more likely to receive a bid below the true firm value (Dong et al., 2006). The Bargaining Hypothesis thus predicts that if the dominant effect of staggered boards is to enhance bargaining power, adopting them will benefit shareholders of firms with low bargaining power.

On the other hand, firms with these characteristics can be viewed as firms with high potential agency costs whose managers seek to entrench themselves. If staggered boards weaken the threat of disciplinary removal (Pound, 1988; Bebchk et al., 2002) then they effectively enable managers to extract private benefits and exacerbate agency costs (Faleye, 2007). If these extra agency costs translate into lower equity value, then managers with low managerial ownership are more likely to propose adopting the provisions (Malatesta and Walkling, 1988), and dispersed shareholders are more likely to approve of those proposals (Jarell and Poulsen, 1987). The Entrenchment Hypothesis thus predicts that if the dominant effect of staggered boards is to entrench inefficient managers, adopting them will harm shareholders of firms with high potential agency costs.

It is possible that when firms adopt staggered board provisions both the bargaining benefit and the entrenchment costs increase. If firms adopted staggered boards in a value-maximizing manner and if it was costless to add or drop staggered board provisions, firms would adopt or repeal these types of provisions when the benefits of doing so outweigh the costs. It is likely, however, that adopting a staggered board is costly. The evidence suggests that institutional investors increasingly oppose proposals to adopt antitakeover provisions, including staggered boards, in seasoned firms (Klausner, 2003; Bebchuk and Cohen, 2005; Bebchuk et al., 2009) and some institutions even adopt blanket policies to always vote against staggered boards (Klausner, 2003; see also the discussion in the Introduction). If this is the case, then it is likely that firms that would benefit from increased bargaining power do not have a staggered board provision in place even if it was optimal. Consequently, adopting a staggered board should be value-enhancing for these firms. Thus, under the Bargaining Hypothesis, we should see that among firms with low bargaining power, firms with staggered boards will have higher firm value (Tobin's Q) than firms without these arrangements.

Under the Entrenchment Hypothesis, conversely, self-interested managers in firms with high potential agency costs propose to adopt staggered board provisions only to entrench themselves. Dispersed shareholders approve of those proposals either because they are uninformed regarding the true effects of the provisions or because it is too costly for them to oppose. If this is the case, then adopting staggered board provisions should be value-decreasing for these firms. Empirically, we should see that among firms with high potential agency costs, firms with staggered boards will have lower firm value (Tobin's Q) than firms without these arrangements in place.

3. Data and summary statistics

To build our sample, we use the Investor Responsibility Research Center (IRRC) database. This database tracks antitakeover and other governance provisions, including staggered boards, for approximately 1500 large U.S. firms in the years 1990, 1993 and 1995, and for approximately 1900 large and smaller U.S. firms in the years 1998, 2000, and 2002. Since the IRRC data are not available every year, we assume that the data remain constant from the last available year to the next as in Gompers et al. (2003) and Bebchuk and Cohen (2005).

For each observation in the IRRC database, we obtain stock price data from the CRSP database and accounting data from the Compustat/CRSP merged database for the years 1990 to 2003, where available. To be included in our sample, a firm-year observation must be listed in IRRC, must have share price and the number of shares outstanding data at the end of the calendar year from CRSP, and positive total assets and positive net sales data at the end of the fiscal year from Compustat. We follow Gompers et al. (2003) and Bebchuk and Cohen (2005) and eliminate from the sample firms with dual class voting shares (approximately 10% of the observations) and REITs (SIC code 6798) since they have their own unique

entrenching devices. As in Gompers et al. (2003) and Bebchuk and Cohen (2005), we retain other financial firms in the sample.

Following other studies (Gompers et al., 2003; Bebchuk and Cohen, 2005; Coles et al., 2008), we use an approximation of Tobin's Q as a measure of firm value. Specifically, we calculate Tobin's Q as the market value of assets divided by the book value of assets, where the market value of assets equals 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. We are able to calculate Q for 18,500 observations in our sample which correspond to 2621 unique firms. Since the relation between staggered board provisions and Tobin's Q is the main focus of our study, we exclude the observations for which the values of Q cannot be calculated.

We use proxies for managerial ownership, shareholder concentration and equity valuation to measure the extent of a firm's bargaining power or the extent of potential agency costs. Managerial ownership is defined as the percent of common equity held by officers and directors. The data on the number of shares owned by officers and directors come from Compact Disclosure. Shareholder concentration is approximated by the dollar market value of equity held by an average shareholder (the larger the shareholding, the more concentrated the ownership),[5] and equity valuation by the ratio of share price to earnings per share (P/E). To control for industry specific effects in the P/E values, we subtract the industry median P/E ratio from the firm-level P/E ratio.[6] We code negative values of P/E as missing since these multiples do not have a meaningful interpretation.[7] Of the 18,500 observations with available Q values, 16,746 also have available values for managerial ownership, 17,897 have available values for shareholder concentration, 17,198 have valid data for industry-adjusted P/E, and 15,137 have data for all three variables of interest.

Panel A of Table 1 presents summary statistics of firm characteristics for our sample. Approximately 61% of firms in our sample use staggered board provisions. This is comparable to Bebchuk and Cohen (2005) who report that in various years 59% to 61.6% of their sample firms use staggered boards. In our analysis, we also control for the use of other antitakeover provisions by including an index of other provisions (O index) in the regression models. To construct this index, we first collect the Gompers et al. (2003) G index, which is a simple count of the antitakeover and other shareholder-rights-reducing provisions a firm has in place. Because staggered board is part of the G index, we construct O index as G index minus Staggered Board indicator. In our sample, mean and median values of the G index are 9.23 and 9. In comparison, Gompers et al. (2003) report an annual average G index of 8.9 to 9.3 and a median G index of 9. The sample mean and median values of the O index are 8.62 and 9.

Table 1. Descriptive statistics

The sample consists of 18,500 observations for 2621 firms that are in the IRRC database and that have sufficient data in the CRSP and Compustat databases to compute Tobin's Q. The sample period is from 1990 to 2003. Firms with dual class shares and REITs are excluded. Staggered Board is an indicator that equals one if the firm has staggered board provision and zero otherwise. G index is the governance index of Gompers et al. (2003). O index is G index minus Staggered Board. Tobin's Q is the ratio of market value of assets to book value of assets, where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common stock and balance sheet deferred taxes. All book values for fiscal year *t* (from Compustat) are combined with the market value of common equity at the end of calendar year *t* (from CRSP). Below Industry Median Dummy equals one if the variable is below its 2-digit SIC code industry median in that year and equals zero otherwise. Managerial Ownership is the proportion of shares held by officers and directors. Shareholder Concentration is equity held by an average shareholder in $ thousands calculated as the market value of common equity divided by the number of shareholders. P/E is the ratio of price per share to operating earnings per share. Industry adjusted ln(P/E) is ln(P/E) minus 2-digit SIC code industry median ln(P/E) in that year. BARGAINING POWER is the average annual percentile rank of managerial ownership, shareholder concentration, and industry adjusted P/E ratio. Size is market value of equity in $ millions. Leverage is the sum of long-term debt plus debt due in one year divided by the market value of assets. Age is the time elapsed from the first full stock record in CRSP. Delaware is an indicator that equals one if the firm is incorporated in Delaware and zero otherwise. ROA is operating income divided by total assets. R&D/Sales is max(R&D expenditures, 0) scaled by net sales. CAPEX/Assets is capital expenditures scaled by total assets. Panel A provides summary statistics. Panels B and C provide piecewise correlations. * indicates statistical significance at the 1% level.

Table 1 Continued

Panel A: Summary Statistics

	Mean	Median	25th percentile	75th percentile
Antitakeoover Provisions				
Staggered Board	0.61	1	0	1
G index	9.23	9	7	11
O index	8.62	9	7	10
Other Firm Characteristics				
Tobin's Q	1.75	1.29	1.05	1.87
Tobin's Q Below Industry Median Dummy	0.42	0	0	1
Managerial Ownership	9.73%	4.86%	1.90%	11.87%
Shareholder Concentration	702	170	63	493
P/E	12.97	6.20	4.11	9.55
P/E Below Industry Median Dummy	0.45	0	0	1
BARGAINING POWER	0.50	0.50	0.36	0.64
Size	5288	1101	386	3324
Leverage	0.21	0.19	0.10	0.29
Age (in years)	25.6	22.1	11.1	32.5
Delaware	0.53	1	0	1
ROA	0.121	0.123	0.068	0.175
R&D/Sales	0.114	0.000	0.000	0.023
CAPEX/Assets	0.061	0.049	0.027	0.079

Panel B: Pairwise Correlations - Antitakeover Provisions, Tobin's Q, and Bargaining Power

	Cl. Board	G index	Tobin's Q
Staggered Board	1		
G index	0.50*	1	
Tobin's Q	-0.07*	-0.11*	1
ln(Managerial Ownership*100+1)	-0.05*	-0.22*	0.05*
ln(Shareholder Concentration)	-0.07*	-0.11*	0.41*
ln(P/E) Industry Adjusted	-0.03*	-0.09*	0.46*
BARGAINING POWER	-0.09*	-0.21*	0.45*

Panel C: Pairwise Correlations - Bargaining Power Variables

	ln(Managerial Ownership*100+1)	ln(Shareholder Concentration)	ln(P/E) Industry Adjusted
ln(Managerial Ownership*100+1)	1		
ln(Shareholder Concentration)	0.11*	1	
ln(P/E) Industry Adjusted	0.04*	0.33*	1
BARGAINING POWER	0.58*	0.64*	0.61*

In our sample, officers and directors own 4.9 % of the common equity in a median firm. Approximately 45% of the firms have P/E ratios below their respective industry median, and approximately 42% of the firms have Q ratios below their respective industry median. The median firm in the sample has a market capitalization of $1.1 billion. About 53% of the sample firms are incorporated in the State of Delaware. The median firm in the sample has been listed on the CRSP files for 22 years.

In Panel B of Table 1, we present pairwise correlations between the main variables. Consistent with the discussion in the previous section, the variables measuring bargaining power significantly negatively correlate with the Staggered Board indicator. As managerial ownership, shareholder concentration, and industry-adjusted P/E ratios increase, the likelihood that a firm uses a staggered board decreases. In our subsequent analyses, we follow Straska and Waller (2010) and combine the three variables of interest into

one variable designed to capture a firm's bargaining power on one hand and its agency cost potential on the other. This increases the power of the regression-based tests by reducing dimensionality and mitigating the difficulties arising from collinearity. To simplify the terminology, we call the variable *BARGAINING POWER*. To construct this variable, we first assign a percentile rank to every firm in every year for each of the three characteristics: managerial ownership, shareholder concentration, and industry-adjusted P/E ratio. *BARGAINING POWER* is then calculated as an average of the three percentile ranks. By design, as reported in Table 1 Panel C, *BARGAINING POWER* positively correlates with managerial ownership, shareholder concentration, and industry adjusted P/E. Furthermore, as expected and reported in Panel B, *BARGAINING POWER* significantly negatively correlates with the Staggered Board indicator.

4. Univariate results

We provide univariate comparisons of the main variables for various subsamples of data in Table 2. In Panel A, we first compare the tendency of firms to adopt staggered boards for the subsamples with various degrees of bargaining power. To construct the subsamples, each year we divide the sample firms into terciles based on the level of *BARGAINING POWER*. The firms in the bottom tercile are referred to as firms with low bargaining power, and the firms in the highest tercile as firms with high bargaining power. Our results indicate that staggered boards are less common in firms with low bargaining power compared to firms with high bargaining power (56% versus 65%). The difference is statistically significant at the 1% level. This result is consistent with the view that potentially benefitting firms are more likely to adopt staggered board provisions.

Table 2. Univariate comparisons

Panel A reports sample averages of the Staggered Board indicator for the subsamples with high and low Bargaining Power. Panels B reports average and median Tobin's Q for the subsamples with high and low Bargaining Power and with and without staggered boards. The sample period is from 1990 to 2003. Tobin's Q is the ratio of market value of assets to book value of assets. Bargaining Power is the average annual percentile rank of managerial ownership, shareholder concentration, and industry adjusted P/E ratio. The subsample with High (Low) Bargaining Power includes observations with the Bargaining Power in the highest (lowest) tercile. The terciles are calculated annually. Reported t-statistics are based on two-sided t-test of the difference in the averages. Reported z-statistics are based on two-sided Wilcoxon rank-sum test of the difference in medians. Tobin's Q is winsorized at the 1% and 99% levels.

Panel A: Staggered Board by Bargaining Power

	Staggered Board
High Bargaining Power	0.56
Low Bargaining Power	0.65
t-statistic	(9.37)

Panel B: Tobin's Q by Bargaining Power and Staggered Board

		Staggered Board = 0	Staggered Board = 1	t-statistic z-statistic
High Bargaining Power	Mean	2.48	2.29	(4.42)
	Median	1.89	1.78	(2.98)
Low Bargaining Power	Mean	1.23	1.26	(2.29)
	Median	1.10	1.13	(3.54)

We next compare the average and median Tobin's Q for the subsamples with high and low bargaining power further divided into subsamples with and without staggered board provisions. The results in Table 2, Panel B suggest that among firms with low bargaining power, those firms with staggered boards have higher average Tobin's Q compared to the firms without staggered boards (Q = 1.26 versus 1.23). This difference is statistically significant at the 5% level. Comparing medians of Tobin's Q instead of averages yields similar, albeit statistically stronger, results. Consistent with the Bargaining Hypothesis and contrary

to the Entrenchment Hypothesis, these preliminary results indicate that firms with staggered boards have higher Tobin's Q than firms without staggered boards in the subsample of potentially benefitting firms.

5. Multivariate results

In this section, we extend the univariate analysis to a multivariate setting to control for other determinants of staggered board provisions and Tobin's Q.

5.1 Determinants of the tendency to have staggered board

Our first step is to examine whether the tendency of firms with low bargaining power to have staggered board obtains in a multivariate setting. To do so, we regress a *Staggered Board* indicator on variables indicating the extent of bargaining power and a set of control variables selected predominantly based on prior literature. Specifically, we control for size, leverage, age, R&D intensity, profitability, incorporation in Delaware, and time and industry specific effects.

To control for firm size, we include both log of size and its squared term in our models since the effect of size on staggered boards might be non-linear. Comment and Schwert (1995) report that an increase in size decreases takeover likelihood, which suggests that large firms may have a lower need for the additional takeover protection a staggered board provision offers. However, as firm size increases, the number of potential acquirers decreases and so does competition for the target firm and the potential takeover premium. This suggests that larger firms might have a greater need for increased bargaining power. Similar to size, we also include leverage and leverage squared in our models. High leverage can be a takeover deterrent since potential acquirers will have to assume the target's debt but high leverage may also lead to increased takeover protection since debtholders may find unwanted changes in control risky with respect to the securities they hold. In addition to size and leverage, we include firm age to proxy for maturity, R&D intensity to proxy for investment in long-term, hard-to-value projects (Daines and Klausner, 2001), return on assets (ROA) in the current and the prior two years to proxy for profitability or poor management, a dummy indicating incorporation in Delaware to account for the state of incorporation (Danielson and Karpoff, 1998), and industry (two-digit SIC) and year dummies to control for industry and time specific effects.

The results are presented in Table 3. Because *Staggered Board* is an indicator variable, we estimate the regressions as simple logit models and report marginal effects at variable means. Statistical significance is based on robust standard errors to account for potential heteroskedasticity. To moderate the influence of outliers on our results, here and throughout, all ratio variables are winsorized at the 1st and 99th percentile.

Table 3 . Staggered board and bargaining power

Logit regressions of the Staggered Board indicator on variables indicating the degree of bargaining power. The sample period is from 1990 to 2003. Managerial Ownership is the proportion of shares held by officers and directors. Shareholder Concentration is equity held by an average shareholder in $ thousands. P/E is the ratio of price per share to operating earnings per share. Industry adjusted ln(P/E) is ln(P/E) minus median industry ln(P/E) in that year. Industry is defined at 2-digit SIC code level. BARGAINING POWER is the average annual percentile rank of managerial ownership, shareholder concentration, and industry adjusted P/E ratio. LOW BARGAINING POWER is a dummy that equals one if the BARGAINING POWER is below the sample median in a given year and equals zero otherwise. All other variables are defined in Table 1. All ratios are winsorized at the 1% and 99% levels. The table reports marginal effects at variable means. (d) indicates marginal effects for discrete change of dummy variable from 0 to 1. Robust standard errors are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

Table 3 Continued

Dependent Variable	Staggered Board		
	(1)	(2)	(3)
ln(Managerial Ownership*100+1)	-0.032***		
	(0.005)		
ln(Shareholder Concentration)	-0.030***		
	(0.004)		
ln(P/E) Industry Adjusted	-0.009		
	(0.009)		
BARGAINING POWER		-0.248***	
		(0.026)	
LOW BARGAINING POWER (d)			0.063***
			(0.009)
ln(Size)	0.117***	0.102***	0.092***
	(0.016)	(0.015)	(0.015)
ln(Size) Squared	-0.008***	-0.007***	-0.006***
	(0.001)	(0.001)	(0.001)
Leverage	0.194**	0.089	0.189**
	(0.085)	(0.085)	(0.084)
Leverage Squared	-0.563***	-0.463***	-0.550***
	(0.132)	(0.136)	(0.135)
ln(Age)	-0.036***	-0.033***	-0.027***
	(0.006)	(0.006)	(0.006)
Delaware (d)	0.015*	0.011	0.010
	(0.008)	(0.008)	(0.008)
ROA	-0.035	-0.141	-0.117
	(0.103)	(0.098)	(0.099)
lag(ROA)	0.076	0.075	0.066
	(0.107)	(0.109)	(0.109)
lag2(ROA)	-0.083	-0.064	-0.074
	(0.084)	(0.085)	(0.085)
R&D/Sales	-0.525***	-0.497***	-0.527***
	(0.098)	(0.097)	(0.097)
Intercept, Year Dummies, Industry Dummies, Missing R&D Dummy	Yes	Yes	Yes
Observations	14895	14895	14895

The results in Model (1) indicate that as managerial ownership, shareholder concentration, and industry adjusted P/E ratio increase, the likelihood of having a staggered board decreases. The first two effects are statistically significant at the 1% level; however, the effect of industry-adjusted P/E is insignificant. In Model (2) we replace the three variables indicating the extent of bargaining power by the combined *BARGAINING POWER* variable and report similar results. *BARGAINING POWER* is significantly (p-value<0.01) negatively related to the likelihood of having a staggered board. Lastly, in Model (3) we replace the continuous *BARGAINING POWER* variable with a dummy indicating *LOW BARGAINING*

POWER. This dummy takes the value of one if the continuous variable falls below the sample median in a given year and takes the value of zero otherwise. Using the dummy in place of the continuous variable allows for easier economic interpretation of the relation between bargaining power, staggered board, and in further tests, Tobin's Q. Consistent with the previous results, *LOW BARGAINING POWER* has a positive and significant effect on the likelihood of having a staggered board. In summary, the results indicate that the potentially benefitting firms are significantly more likely to have staggered boards.

In terms of control variables, the coefficient estimates on log of size and log of size squared indicate that the relationship between size and the likelihood of having a staggered board is curvilinear. This may mean that as size increases, firms seek to increase bargaining power, but for very large firms size may be a takeover deterrent. A similar curvilinear relationship also obtains between the likelihood of having a staggered board and leverage. Firms are also more likely to have staggered board if they are younger and less R&D intensive. Finally, there seems to be little relationship between the likelihood of having a staggered board and profitability.

5.2 Effect of staggered board on Tobin's Q by bargaining power

We next examine the relationship between *Staggered Board* and Tobin's Q for firms with various degrees of bargaining power. To investigate our hypotheses, we estimate two alternative regression equations. In the first equation, we measure the extent of bargaining power a firm has with our continuous proxy variable. The first equation is specified as follows:

$$\begin{aligned} Q = {} & \beta_0 + \beta_1 StaggeredBoard + \beta_2 StaggeredBoard \times BARGAINING\ POWER + \\ & + \beta_3 Oindex + \beta_4 Oindex \times BARGAINING\ POWER + \\ & + \gamma\ BARGAINING\ POWER + \delta\ Control\ Variables + \varepsilon. \end{aligned} \quad (1)$$

In Eq. 1, β_1 captures the effect of *Staggered Board* on Tobin's Q when *BARGAINING POWER* equals zero.[8] β_2 measures how the effect of *Staggered Board* on Tobin's Q changes when *BARGAINING POWER* changes. Under our Bargaining Hypothesis, we expect β_1 to be positive and β_2 to be negative; under our Entrenchment Hypothesis, we expect β_2 to be negative and β_2 to be positive.

In the second equation we measure the extent of bargaining power with the *LOW BARGAINING POWER* dummy. The equation is specified as follows:

$$\begin{aligned} Q = {} & \kappa_0 + \kappa_1 StaggeredBoard + \kappa_2 StaggeredBoard \times LOW\ BARGAINING\ POWER + \\ & + \kappa_3 Oindex + \kappa_4 Oindex \times LOW\ BARGAINING\ POWER + \\ & + \theta\ LOW\ BARGAINING\ POWER + \xi\ Control\ Variables + \varepsilon. \end{aligned} \quad (2)$$

In Eq. 2, κ_1 captures the effect of *Staggered Board* on Tobin's Q for firms with high bargaining power. κ_2 is the incremental effect of *Staggered Board* on Tobin's Q for firms with low bargaining power, while $\kappa_1 + \kappa_2$ measures the overall effect of *Staggered Board* on Tobin's Q for firms with low bargaining power. Under our Bargaining Hypothesis, we expect $\kappa_1 + \kappa_2$ be positive; under our Entrenchment Hypothesis, we expect $\kappa_1 + \kappa_2$ to be negative.

To isolate the main effects, we include in both equations *O index* to control for antitakeover provisions other than a staggered board and a set of *Control Variables*. This set includes all control variables that we used as determinants of the likelihood of having staggered board in Table 3 since, according to past research, these variables also likely explain Tobin's Q (McConnell and Servaes, 1995; Bebchuk and Cohen, 2005; Coles et al., 2008). In addition, following Bebchuk and Cohen (2005), we include in the regressions a proxy for capital expenditures.[9]

We estimate the base regressions specified by Eq. 1 and Eq. 2 using pooled OLS with time and industry specific effects.[10] Statistical significance of the coefficient estimates is based on robust standard errors to account for potential heteroskedasticity. The results of the base regression specified by Eq. 1 are presented in Table 4, Model (1). The coefficient estimate on *Staggered Board* (β_1 is positive, while the

coefficient on the interaction between *Staggered Board* and *BARGAINING POWER* (β_2) is negative. Both coefficients are statistically significant at the 1% level. These results are just the opposite of what one would expect under the Entrenchment Hypothesis. Rather, these results appear consistent with our Bargaining Hypothesis and suggest that when bargaining power is low, firms with staggered boards have higher Tobin's Q than firms without staggered boards, but as bargaining power increases, the marginal effect of *Staggered board* on Tobin's Q decreases.

Table 4. Tobin's Q, staggered board and bargaining power

Pooled OLS regressions of Tobin's Q on the Staggered Board indicator interacted with BARGAINING POWER. O index is G index developed in Gompers et al. (2003) minus the Staggered Board indicator. Tobin's Q is the ratio of market value of assets to book value of assets. BARGAINING POWER is the average annual percentile rank of managerial ownership, shareholder concentration, and industry adjusted P/E ratio. Staggered Board and O index are contemporaneous in model (1), are held constant at the year 1990 level for each firm in model (2), and are held constant at the level first observed in the database in model (3). The sample period is from 1990 to 2003 in models (1) and (3), and is from 1996 to 2003 in model (2). All other variables are defined in Table 1. All ratios are winsorized at the 1% and 99% levels. Robust standard errors are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

Dependent Variable: Tobin's Q		(1)	(2)	(3)
Staggered Board	β_1	0.117***	0.149***	0.145***
		(0.037)	(0.051)	(0.037)
S. Board*BARGAINING POWER	β_2	-0.237***	-0.291**	-0.304***
		(0.085)	(0.131)	(0.085)
O index	β_3	0.054***	0.039***	0.048***
		(0.007)	(0.010)	(0.007)
O index*BARGAINING POWER	β_4	-0.084***	-0.036	-0.070***
		(0.016)	(0.026)	(0.016)
BARGAINING POWER		2.703***	2.187***	2.598***
		(0.136)	(0.209)	(0.126)
Tobin's Q in 1990			0.164***	
			(0.023)	
ln(Size)		-0.391***	-0.426***	-0.388***
		(0.030)	(0.049)	(0.030)
ln(Size) Squared		0.037***	0.036***	0.037***
		(0.002)	(0.003)	(0.002)
Leverage		-3.074***	-3.419***	-3.075***
		(0.132)	(0.220)	(0.132)
Leverage Squared		4.652***	5.312***	4.663***
		(0.192)	(0.331)	(0.192)
ln(Age)		-0.068***	0.028	-0.067***
		(0.010)	(0.023)	(0.010)
Delaware		-0.020	-0.063***	-0.022*
		(0.013)	(0.020)	(0.013)
ROA		7.219***	7.408***	7.232***
		(0.212)	(0.328)	(0.213)
lag(ROA)		0.160	0.382	0.158
		(0.220)	(0.315)	(0.220)
lag2(ROA)		0.038	0.218	0.042
		(0.179)	(0.282)	(0.179)
R&D/Sales		3.013***	2.477***	3.020***
		(0.252)	(0.432)	(0.252)
CAPEX/Assets		-1.731***	-1.552***	-1.730***
		(0.199)	(0.315)	(0.199)
Intercept, Year Dummies, Industry Dummies, Missing R&D Dummy		Yes	Yes	Yes
Observations		13756	4597	13756
R-squared		0.676	0.759	0.676

Examining the coefficients on *O index* and its interaction with *BARGAINING POWER*, we observe that the effect of *O index* on Tobin's Q is positive for firms with low bargaining power, but as bargaining power increases, the effect of *O index* decreases. This suggests that firms with low bargaining power benefit not only from adopting a staggered board, but also from adopting more antitakeover provisions other than staggered boards, a result consistent with findings in Straska and Waller (2010).

In Table 5, Model (1) we present the base estimations of Eq. 2. Similar to the base results for Eq. 1, the base results for Eq. 2 appear inconsistent with the Entrenchment Hypothesis. Specifically, the coefficient estimate on *Staggered Board* (κ_1 is negative and statistically significant at the 5% level, but the coefficient estimate on the interaction between *Staggered Board* and the *LOW BARGAINING POWER* dummy (κ_2) is positive, larger in magnitude, and significant at the 1% level. More importantly, the total effect of *Staggered Board* on Tobin's Q for firms with low bargaining power (i.e., $\kappa_1 + \kappa_2$; see the bottom of Table 5) is positive and significant at the 5% level, implying that the negative effect of *Staggered Board* on Tobin's Q for firms with high bargaining power is more than offset for firms with low bargaining power. Consistent with the Bargaining Hypothesis, these results suggest that firms with low bargaining power, both relative to firms with high bargaining power and in absolute terms, benefit from having staggered boards.

Table 5. Tobin's Q, staggered board and low bargaining power

Pooled OLS regressions of Tobin's Q on the Staggered Board indicator interacted with the LOW BARGAINING POWER dummy. Tobin's Q is the ratio of market value of assets to book value of assets. O index is G index developed in Gompers et al. (2003) minus the Staggered Board indicator. BARGAINING POWER is the average annual percentile rank of managerial ownership, shareholder concentration, and industry adjusted P/E ratio. LOW BARGAINING POWER is a dummy that equals one if the BARGAINING POWER is below the sample median in a given year and equals zero otherwise. Staggered Board and O index are contemporaneous in model (1), are held constant at the year 1990 level for each firm in model (2), and are held constant at the level first observed in the database in model (3). The sample period is from 1990 to 2003 in models (1) and (3), and is from 1996 to 2003 in model (2). All regressions include the same control variables as those reported in Table 4. Only the estimates on main variables of interest are reported. All ratios are winsorized at the 1% and 99% levels. Robust standard errors are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

Dependent Variable: Tobin's Q		(1)	(2)	(3)
Staggered Board	κ_1	-0.052**	-0.067	-0.071***
		(0.025)	(0.043)	(0.025)
S. Board*LOW BARGAINING POWER	κ_2	0.082***	0.127***	0.112***
		(0.028)	(0.047)	(0.028)
O index	κ_3	-0.014***	0.014*	-0.010**
		(0.004)	(0.008)	(0.004)
O index*LOW BARGAINING POWER	κ_4	0.035***	0.010	0.028***
		(0.005)	(0.009)	(0.005)
LOW BARGAINING POWER		-0.780***	-0.560***	-0.725***
		(0.045)	(0.073)	(0.042)
Tobin's Q in 1990			0.188***	
			(0.024)	
Intercept, Year Dummies, Industry Dummies, Missing R&D Dummy		Yes	Yes	Yes
Observations		13756	4597	13756
R-squared		0.646	0.742	0.646
$\kappa_1 + \kappa_2$		0.030**	0.060***	0.041***

F statistic, test $\kappa_1 + \kappa_2 = 0$	4.61	8.64	8.58
$\kappa_3 + \kappa_4$	0.021***	0.024***	0.018***
F statistic, test $\kappa_3 + \kappa_4 = 0$	59.26	36.35	46.73

The results reported in Table 5 also appear to be significant in economic terms. The coefficient estimate of 0.03 on the *Staggered Board* indicator for firms with low bargaining power ($\kappa_1 + \kappa_2$) suggests that adopting staggered board would increase Tobin's Q by about 0.03. Given that the average Tobin's Q for this class of firms is 1.33, the increase would translate to about a 2.3% gain in Q.

Examining the overall effect of *O index* on Tobin's Q for firms with low bargaining power (i.e., $\kappa_3 + \kappa_4$; see the bottom of Table 5) we again observe that having higher *O index* is associated with higher firm value. This again indicates that firms with low bargaining power may benefit from adopting more antitakeover provisions other than a staggered board.

5.3 Addressing endogeneity

In the regressions of Tobin's Q in the previous section, we use *Staggered Board* as an independent variable. However, as we previously argue, firm equity valuation should have an impact on the likelihood of having a staggered board in place. Although we control for this effect by including *BARGAINING POWER* and *LOW BARGAINING POWER* in our regressions, Tobin's Q itself is an alternative measure of valuation and thus the control may be incomplete. Our tests are therefore subject to a potential endogeneity problem. We use several approaches to address this issue.

First, following Bebchuk and Cohen (2005), we replace the actual *Staggered Board* in Eq.1 and Eq.2 with *Staggered Board* fixed at the 1990 level and estimate Eq.1 and Eq.2 using only the second part of the sample period from 1996 to 2003. As Bebchuk and Cohen argue, during the 1990s it would have been difficult for mature firms to adopt staggered board provisions due to the pressure for shareholder friendly governance structures. Thus, whether a mature firm had a staggered board in place in the late 1990s largely depended on whether the firm had the provision prior to 1990. Yet while it is plausible that having a staggered board in 1990 determines the likelihood of having a staggered board in later periods, it is unlikely that firm characteristics in the later period influence the likelihood of having a staggered board in 1990. Thus, replacing the contemporaneous *Staggered Board* indicator with *Staggered Board* in 1990 can alleviate some endogeneity problems.[11]

One problem with inference may still arise when firm characteristics correlate over time. For example, if firm value in 1990 positively correlates with firm value in 1996, one may still observe a relation between firm value in 1996 and staggered board in 1990, even if having staggered board does not influence value but value influences the likelihood of having staggered board. To control for this possibility, we include Tobin's Q in 1990 as an additional control variable in Eq.1 and Eq.2.

The results of re-estimating Eq. 1 are reported in Table 4, Model (2). Consistent with the base results in Model (1), these results also indicate that when bargaining power is low, firms with staggered boards have higher Tobin's Q (β_1). The results of re-estimating Eq. 2 are reported in Table 5, Model (2). As in the base results in Model (1), the coefficient on the interaction between *Staggered Board* and the *LOW BARGAINIG POWER* dummy is positive and significant at the 1% level, and the overall effect of *Staggered Board* on firm value for the firms with low bargaining power is also positive and statistically significant at the 1% level ($\kappa_1+\kappa_2$), albeit twice as large in magnitude.

In our second approach to address endogeneity, we alternatively re-estimate our regression models using the first sample observation of *Staggered Board* in place of the contemporaneous *Staggered Board* as in Dittmar and Mahrt-Smith (2007). The motivation behind this approach is the same as the motivation behind the method used in Bebchuk and Cohen (2005) that for mature firms it was hard to adopt staggered boards after 1990. The results, reported in Models (3) of Tables 4 and 5, appear to be very similar to the base results.

Conclusion

In this paper, we challenge the widely held view among practitioners and researchers that adopting staggered board provisions is universally harmful for shareholders. We observe that staggered boards are more common in firms that have characteristics consistent with both low bargaining power and high potential agency costs. We hypothesize that if the dominant effect of adopting staggered board is to provide greater bargaining power in the event of a takeover attempt, then among firms with low bargaining power, those with staggered boards should have higher Tobin's Q. Conversely, if the dominant effect of adopting staggered boards is to entrench managers and shield them from the discipline of the market for corporate control, then among firms with high potential agency costs, those with staggered boards should have lower Tobin's Q.

Our empirical results support the argument that adopting a staggered board provision can be value-enhancing for firms with low bargaining power. We first document that these firms are more likely to have staggered boards. We further find that the relation between Tobin's Q and the presence of a staggered board is positive for these firms. This relation persists even after our best attempts to control for endogeneity.

Overall, our results are inconsistent with the view that having a staggered board in place is necessarily harmful for shareholders. At a minimum, our evidence suggests that the recent efforts made by shareholder activists to repeal previously adopted staggered boards or to consistently vote against adopting staggered boards regardless of firm type may be misguided in certain cases. In addition, the evidence raises concerns about the increasing trend of practitioners creating corporate governance metrics that effectively penalize firms for having staggered board provisions in place.

Notes

[1] A poison pill is a special right attached to a share of common stock that gives the stockholder a right to buy additional shares of the target or the acquirer or both at a bargain price when an outside acquirer accumulates a certain percentage (for example 15 or 20 percent) of the target firm's shares. These rights, when triggered, cannot be exercised by the acquirer. The pills therefore make any takeover that is opposed by the board prohibitively expensive.
[2] See pages 16 and 18 of the 2010 U.S. Proxy Voting Guidelines Summary from February 25, 2010 downloadable at http://www.issgovernance.com/files/RMG_2010_US_SummaryGuidelines20100225.pdf.
[3] See pages 79 and 80 of the ISS Governance Risk Indicators from September 15, 2010 downloadable at http://www.issgovernance.com/files/GRId_Tech_Doc_Final_20100915.pdf.
[4] See page 11 of the TIAA-CREF policy statement on corporate governance downloadable at http://www.tiaa-cref.org/ucm/groups/content/@ap_ucm_p_tcp/documents/document/tiaa01007871.pdf.
[5] As a robustness check we replicate all regressions presented here using a Herfindahl index of outside blockholdings as an alternative measure of shareholder concentration (untabulated). We compute the Herfindahl index as a sum of squared equity holdings of blockholders not affiliated with the officers or directors using clean Blockholder data available on WRDS (Dlugosz et al., 2006). Because the blockholder data is only available for the period from 1996 to 2001, our sample size reduces to about 40% of the original sample size. Nevertheless, the results are similar qualitatively and in statistical significance to the results presented here, with only few exceptions.
[6] Industry median P/E is calculated at the two-digit SIC code level using all firms in the CRSP/Compustat merged database that have positive total assets and positive net sales at the end of the fiscal year and for which data are available to calculate a valid P/E. For the industry median to be valid, we require at least five observations in an industry in a given year.
[7] McConnell and Servaes (1995), for example, also exclude observations with negative P/E from their analysis. This causes us to lose about 5.4% of the observations.
[8] Note that the minimum and maximum level of *BARGAINING POWER* is 0.01 and 0.99 respectively.
[9] Our results and inferences remain substantively unchanged if we measure size by total assets rather than market value of equity or if we include as controls only the variables also included by Bebchuk and Cohen (2005).
[10] As a robustness check, we estimate regression coefficients using the annual Fama and MacBeth (1973) type regressions as in Gompers et al. (2003) and Bebchuk and Cohen (2005). The results are similar in magnitude to the results from pooled OLS regressions. Alternatively, we estimate all

regressions using median regressions as in Coles et al. (2008). The results are statistically similar but smaller in magnitude than the results from pooled OLS regressions.

[11] Because similar reasoning also applies to the provisions contained in O index, we replace contemporaneous O index with O index in 1990. In our data, the correlation between Classified Board in 1990 and over 1996-2003 is 0.87 and the correlation between O index in 1990 and over 1996-2003 is 0.81.

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