

Board classification and managerial entrenchment: Evidence from the market for corporate control[☆]

Thomas W. Bates^{a,*}, David A. Becher^b, Michael L. Lemmon^c

^a*Department of Finance, Eller College of Management, University of Arizona, Tucson, AZ 85721, USA*

^b*Department of Finance, LeBow College of Business, Drexel University, Philadelphia, PA 19104, USA*

^c*Department of Finance, David Eccles School of Business, University of Utah, Salt Lake City, UT 84112, USA*

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Abstract

This paper considers the relation between board classification, takeover activity, and transaction outcomes for a panel of firms between 1990 and 2002. Target board classification does not change the likelihood that a firm, once targeted, is ultimately acquired. Moreover, shareholders of targets with a classified board realize bid returns that are equivalent to those of targets with a single class of directors, but receive a higher proportion of total bid surplus. Board classification does reduce the likelihood of receiving a takeover bid, however, the economic effect of bid deterrence on the value of the firm is quite small. Overall, the evidence is inconsistent with the conventional wisdom that board classification is an anti-takeover device that facilitates managerial entrenchment.

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1. Introduction

Board classification is a corporate governance structure that staggers the annual election of director slates. In the absence of a classified board, all continuing and nominated directors of a corporation stand for election annually. In contrast, corporations with a classified board, also referred to as a staggered board, assemble directors into distinct classes (typically three) with successive annual elections occurring only for a single class

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*Corresponding author.

E-mail address: batest@eller.arizona.edu (T.W. Bates).

of directors. Therefore, under a classified structure, directors are elected to terms equal in length to the number of classes. Board classification is a common feature of US corporate governance today. For example, among the approximately three thousand publicly traded firms covered by the Investor Responsibility Research Center (IRRC) between 1990 and 2002, a majority have a classified board.¹

The literature has largely emphasized the anti-takeover properties of classified boards when motivating their adoption and maintenance. For example, in establishing a corporate governance index, Gompers, Ishii, and Metrick (2003) suggest that board classification is “one of the few provisions that clearly retains some deterrent value in modern takeover battles.” Daines and Klausner (2001) also reason that board classification has “no justification except to ward off challenges for control.” A classified board presents a formidable obstacle to a change-in-control bid contested by target management because staggered elections make it impossible for a hostile bidder to remove a majority of incumbent directors without waiting for a minimum of two elections cycles.² Therefore, as summarized in Bebchuk and Cohen (2005), target board classification can raise the expected costs of bidders contemplating a hostile change-in-control bid. While firms can employ a number of alternative anti-takeover provisions, arguably none presents as prohibitive of an expense for prospective acquirers.

Evidence in Bebchuk and Cohen (2005) and Bebchuk, Cohen, and Ferrell (2004) indicates that board classification is systematically associated with lower firm value. The general supposition in these papers is that board classification insulates management from the market for corporate control and is therefore a causal antecedent to agency conflict in firms. Consistent with this view, Faleye (2007) finds that firms with classified boards have a lower sensitivity of both chief executive officer (CEO) pay and CEO turnover to firm performance. Masulis, Wang, and Xie (2007) also show that bidding firms with classified boards have lower announcement period returns in takeover transactions. This evidence has sparked a vigorous academic and policy debate, with some calling for a wholesale abolition of the structure on the grounds that it facilitates managerial entrenchment. Despite these claims, however, the extant literature offers no direct evidence that target board classification is reliably associated with characteristics of the market for corporate control. Our study fills this void. Specifically, this paper evaluates the relation between board classification and the likelihood of takeover bidding, bid outcomes, and concomitant shareholder wealth effects.

The first component of the analysis considers whether target board classification is reliably associated with bid outcomes or self-dealing by target managers in observed change-in-control bids. Over 10% of the initial bids for targets with a classified board in our sample elicit a hostile response from management, roughly twice the rate of bid hostility (4.94%) for targets with a single class of directors. Controlling for transaction and target firm characteristics, however, we find that targets with a classified board are ultimately acquired at an equivalent rate as targets with a single class of directors. This result is not consistent with the premise that board classification is systematically used by entrenched managers to defeat takeover bids.

To evaluate whether board classification enables incumbent managers to extract private benefits during change-in-control events, we identify the post-transaction employment outcomes for target CEOs following the completed transactions in our sample. The CEOs of targets with classified boards are employed by the acquiring firm, either as a manager or director, at a statistically equivalent rate as the CEOs of targets with a single class of directors. This finding does not comport with the notion that board classification facilitates self-dealing by incumbent managers during takeover bids.

Finally, we analyze the shareholder wealth effects associated with observed change-in control bids conditioned on the target's use of a classified board. Controlling for bid and target firm characteristics, board classification has an insignificant impact on the cumulative abnormal returns (CARs) realized by target shareholders estimated either over the bid announcement period or from the bid announcement through the eventual culmination of a transaction. Announcement CARs for bidding shareholders, however, are 2.7% lower in bids involving target classified boards. An analysis of the distribution of transaction surplus between

¹The IRRC governance database has 10,121 total firm and year observations between 1990 and 2002 of which 5911 observations are recorded as having a classified board structure.

²The proxy process and interval required to replace incumbent directors depends upon the ability of shareholders to call special meetings and replace directors without cause, conditions typically restricted in firms with a classified board. See Bebchuk, Coates, and Subramanian (2002) for a summary of these constraints.

target and bidding shareholders in completed deals indicates that target shareholders of firms with classified boards receive a larger proportional share of the total value gains to mergers relative to the gains to target shareholders of firms with a single class of directors. Overall, the evidence is inconsistent with the view that board classification is associated with managerial entrenchment and instead suggests that classification improves the relative bargaining power of target managers on behalf of their constituent shareholders.

The second component of our analysis evaluates the extent of any bid deterrence attributable to classified boards. Controlling for the potentially endogenous decision to maintain a classified board, classification is associated with a 1.0% reduction in the likelihood of receiving a takeover bid. This effect is substantial relative to the observed bid frequency of 3.6% for the subsample of targets with classified boards, leading us to infer that deterrence is the primary channel through which a classified board alters a firm's exposure to the market for corporate control. We parameterize the hypothetical gain to eliminating bid deterrence for firms with a classified board and benchmark these potential gains to the differences in value between firms with and without classified boards. In keeping with prior research, we find that the average value of firms with a classified board, as proxied by Tobin's Q , is approximately 11% lower than the average Q for firms with a single class of directors. Our analysis indicates, however, that bid deterrence can explain only about one tenth of the difference in firm value between firms with and without classified boards.

This work makes several contributions to the existing literature. First, the evidence suggests that classified boards neither entrench managers in the context of takeover bidding nor facilitate managerial self-dealing in completed bids. Given this evidence, we question the basis for calls to enhance the standard of regulatory or judicial scrutiny over transactions involving targets with classified boards. Second, our analysis identifies a significant bid deterrence effect associated with classified board provisions, however, deterrence provides an incomplete explanation for the differences in firm value commonly attributed to managerial entrenchment. Furthermore, given the observed bid outcomes for the transactions in our study, it remains unclear whether the takeover bids that might obtain in the absence of board classification would be efficient for target shareholders. Finally, while board classification is a potent anti-takeover mechanism, it is just one of many factors commonly indexed when evaluating the quality of corporate governance and the extent of shareholder rights in corporations. The results of this paper challenge the common perception that these factors, independently or as indexed, provide a reliable proxy for managerial entrenchment or a firm's exposure to the market for corporate control. Given a notable dearth of research concerning the possible shareholder benefits of classified boards that might accrue outside of the market for corporate control, our results suggest that a circumspect policy approach be applied when considering the adoption or dissolution of this common governance provision.³

The remainder of this paper is structured as follows. In Section 2, we summarize the theoretical literature concerning board classification and characteristics of the market for corporate control. Section 3 reviews the empirical literature on board classification, change-in-control transactions, and firm value, and it highlights corollary policy implications. Section 4 describes the sampling of firm-year observations for governance characteristics and takeover activity. In Section 5 we examine bid outcomes and the wealth gains to target and bidding shareholders conditioned on the target firm's use of a classified board. In Section 6 we estimate the likelihood of receiving a takeover bid as a function of board classification and parameterize the value loss attributable to bid deterrence. We provide concluding remarks in Section 7.

2. Theory: board classification and the market for corporate control

Board classification can affect the market for corporate control in two ways. First, classification can be utilized at the discretion of target managers to negotiate with a bidder or to reject a transaction outright. Second, board classification can raise the expected cost of bids for prospective acquirers, altering the rate at which bids are observed. In this section we summarize the theoretical relation between board classification and

³Other explanations for the economic efficiency of board classification also exist. For example, extended director terms might promote autonomy between board members and management. Extended and overlapping director terms can also ensure continuity in decision making in instances involving managerial turnover or for firms with investments requiring long-horizon or sequential investment decisions.

these distinct characteristics of the market for corporate control in the context of two alternative hypotheses previously derived in the literature.

2.1. Managerial discretion

The managerial discretion hypothesis suggests that board classification facilitates, or is a byproduct of, managerial entrenchment.⁴ Classification can preserve management's private benefits of control, either preemptively through bid deterrence or after a bid has been received through bid hostility and a lower incidence of bid or auction completion. Managerial discretion can also account for outcomes in friendly and completed bids. Evidence in Hartzell, Ofek, and Yermack (2004) and Wulf (2004) indicates that target managers can engage in self-dealing in negotiations with acquirers at the expense of their constituent shareholders. If board classification endows management with leverage in negotiating for private benefits, the managerial discretion hypothesis predicts that target board classification is associated with a lower incidence of explicit bid negotiation, a higher rate of self-dealing by target management in completed transactions, and lower transaction gains to target shareholders.

2.2. Shareholder interest

A second hypothesis, shareholder interest, suggests that board classification allows target management to deter opportunistic bids while improving target shareholder outcomes during merger and acquisition negotiations. Consistent with this perspective, DeAngelo and Rice (1983) and Stein (1988) infer that anti-takeover provisions dissuade opportunistic bidding in instances in which the value of a firm's projects cannot be accurately conveyed to outside investors. Prior work has established the efficacy of alternative anti-takeover provisions during change-in-control negotiations. For example, Comment and Schwert (1995) find that state anti-takeover laws and poison pill provisions do not systematically deter bids but do increase the premiums received by target shareholders. Furthermore, evidence in Harford (2003) and Yermack (2004) suggests that external incentives could be sufficient to mitigate managerial self-dealing and encourage directors (particularly unaffiliated directors) to proactively represent the interests of target shareholder during a change-in-control bid.

If board classification is used to increase the bargaining power of target managers, the shareholder interest hypothesis predicts that board classification is used to enhance the share of transaction surplus allocated to target shareholders in change-in-control bids. By raising the expected costs of bidding for prospective acquirers, however, the shareholder interest hypothesis also suggests that board classification is associated with a degree of bid deterrence as low value potential suitors refrain from bidding.

3. Literature and policy review

In this section we summarize the literature relating board classification to the value of the firm and characteristics of the market for corporate control. We then review current policy recommendations concerning the adoption and maintenance of board classification generally and in the context of corporate control bids.

3.1. Board classification, firm value, and the market for corporate control

Gompers, Ishii, and Metrick (2003) identify a systematic empirical relation between an index of 24 corporate governance characteristics, including board classification, and firm value and stock returns. In follow-on work, Bebchuk, Cohen, and Ferrell (2004) suggest that a six factor entrenchment index that includes board classification yields the most significant negative correlation with Tobin's Q and long-run equity

⁴Our characterization of the managerial discretion hypothesis in the context of change-in-control bidding is drawn from a substantial volume of prior work first summarized in DeAngelo and Rice (1983). Bebchuk and Cohen (2005) provide a recent discussion of the potential for managerial entrenchment afforded by board classification.

returns. [Bebchuk and Cohen \(2005\)](#) directly examine the cross-sectional relationship between board classification and firm value, and they find that board classification is negatively correlated with industry-adjusted Tobin's Q . In interpreting their findings, these authors infer that board classification insulates management from the market for corporate control and, by extension, exacerbates principal-agent conflict between stockholders and managers. In related research, [Klock, Mansi, and Maxwell \(2005\)](#) find that the cost of corporate debt is decreasing in a firm's use of various anti-takeover provisions, including board classification. Given their evidence, they conclude that these governance features reduce the exposure of debt holders to change-in-control transactions.

Complementary work has considered various channels through which agency problems associated with board classification might manifest in corporations. For example, [Masulis, Wang, and Xie \(2007\)](#) find that announcement period returns are 0.57–0.91% lower for bidding firms with a classified board. They attribute this finding to the self-serving behavior of acquiring firm managers, who themselves are insulated from the market for corporate control. In keeping with the notion that board classification facilitates managerial entrenchment, [Faleye \(2007\)](#) finds that classification reduces the probability of forced CEO turnover, is associated with a lower sensitivity of CEO turnover to firm performance, and is correlated with a lower sensitivity of CEO compensation to changes in shareholder wealth. Faleye, however, censors turnover observations attributable to mergers and acquisitions and therefore does not consider the efficacy of the implied mechanism of managerial discipline, that is, the market for corporate control.

Despite broad support for the notion that board classification insulates managers from the market for corporate control, the empirical evidence relating this governance feature to the likelihood that a firm receives a takeover bid is mixed. [Pound \(1987\)](#) identifies a lower incidence of takeover bids for firms adopting both supermajority and classified board amendments between 1974 and 1984. Alternatively, [Ambrose and Megginson \(1992\)](#) find that the likelihood of takeover bidding between 1981 and 1986 is insignificantly correlated with board classification.

Evidence on the relation between board classification and shareholder welfare in the context of observed takeover bids is also incomplete. [Pound \(1987\)](#) finds that 68% of target firms adopting classified boards and supermajority provisions resist bids, compared with 38% for a control sample. Announcement period returns to target shareholders, however, do not differ across the two groups of firms, leading Pound to conclude that these anti-takeover provisions fail to improve target shareholder welfare in takeover contests. Case law concerning the use of anti-takeover provisions developed substantially between 1985 and 1990 beginning with *Moran v. Household International*.⁵ This and subsequent decisions bolstered the ability of target management to utilize anti-takeover defenses in the context of a contested bid, suggesting that any anti-takeover properties associated with classified boards should be more pronounced after 1989. Accordingly, [Bebchuk, Coates, and Subramanian \(2002\)](#) examine 92 hostile bids between 1996 and 2000. Of the 45 targets with classified boards, 60% (27) remain independent in the nine months following a bid announcement, while 32% (16) of the 47 target firms without a classified board remain independent. [Bebchuk, Coates, and Subramanian](#) also do not find that premiums of hostile bids for firms with and without a classified board are significantly different. Given this evidence they infer that, conditioned on bid hostility, classification (particularly in conjunction with a poison pill) increases the likelihood of target independence but does not yield significantly higher premiums for target shareholders.

In contrast [Heron and Lie \(2006\)](#) find that board classification has an insignificant effect on the likelihood of bid success or target shareholder returns for a sample of hostile and unsolicited acquisition attempts announced between 1985 and 1998. [Gordon \(2002\)](#) also notes that the sample used in [Bebchuk, Coates, and Subramanian](#) omits bid outcomes for a far larger subset of friendly bids, deals in which managers could have successfully leveraged anti-takeover mechanisms to either negotiate higher-value deals for target shareholders or private benefits for themselves. Given this omission, it is difficult to accurately draw inferences regarding the ex ante shareholder welfare implications of board classification using only hostile change-in-control contests.

⁵See *Moran v. Household International Inc.* 500 A.2d 1346 DelSupCt (1985). We refer interested readers to the text of [Bebchuk, Coates, and Subramanian \(2002\)](#) and the appendix of [Comment and Schwert \(1995\)](#) for summaries of the case law concerning anti-takeover provisions.

3.2. Board classification: a policy perspective

Board classification has become the subject of increasing investor scrutiny. Institutional Shareholder Services (ISS) provides a blanket recommendation in its 2006 proxy voting guidelines that its membership vote against proposals to classify a board or alter board structure in the context of a change-in-control bid and vote for proposals to repeal classified board provisions. ISS also recommends withholding votes for directors who have ignored shareholder resolutions to declassify, and ISS lowers its governance score for firms with a classified board. The basis for the ISS position is summarized by Patrick McGurn, senior vice president, who states that studies and empirical evidence show “pretty conclusively that unlike poison pills, there is no evidence that boards use a classified structure to enhance shareholder value. In fact the opposite appears to be true.” (see *Wall Street Journal*, 2005) ISS is not alone in its critique. The largest public pension fund in the US, CalPERS, has targeted firms including Sears, Roebuck & Company and the Maytag Corporation, for shareholder votes to remove board classification from their corporate charters. The proxy voting guidelines of various mutual fund companies including TIAA-CREF and Fidelity Investments also call for voting against the adoption and for the removal of classified board provisions. The TIAA-CREF guidelines, for example, note that “A classified board structure at a public company can be a significant impediment to a free market for corporate control.”

Reform minded critics have also sought relief from the perceived entrenchment properties of board classification through the courts. *Bebchuk, Coates, and Subramanian (2002)* suggest that the election of a single slate of directors proposed by a hostile bidder is equivalent to a successful shareholder referendum on the bid. In this context, they argue for changing the legal rules to mandate the redemption of a poison pill following such an election and to allow the bidder to proceed with a bid. While such a proposal would eliminate the possibility of entrenchment, the revocation of an anti-takeover feature, precisely in the context of a contested bid, can have an unintended consequence of reducing overall bid quality (e.g., *Gordon, 2002*).

In the wake of recent institutional and academic scrutiny, proposals to eliminate classified board provisions from corporate charters are at an all time high. ISS reports that as of October 2005 more than 65 firms had a repeal proposed in the annual proxy, while the proportion of firms covered by ISS with classified boards declined from 55.10% in 2003 to 52.60% in 2005 (see *Institutional Shareholder Services, 2005*). In response to external pressure, directors and management sponsored the majority of board-declassification proposals through the first half of 2005.

4. Data and summary statistics

Our sample includes US public corporations covered in at least one of the volumes published by the Investor Responsibility Research Center (IRRC) between 1990 and 2002. The IRRC volumes include information on a set of 24 governance provisions for firms in the Standard & Poor’s 1500 and other major US corporations and are published for the years 1990, 1993, 1995, 1998, 2000, and 2002. This sample consists of 3,121 unique firms and 10,121 firm-year observations. We match firm-year observations from IRRC to Compustat and retain those with non-missing book value of assets. Following *Gompers, Ishii, and Metrick (2003)* we assume that a firm’s governance provisions (excluding classification) remain in place from the publication date of an IRRC volume until the next publication date. Applying the requirement of non-missing assets data for intervening years our panel consists of 20,335 firm year observations for 3087 unique firms from 1990 to 2002.

Data on the year of adoption for board classification is obtained from IRRC. In the absence of IRRC information, we rely on Security and Exchange Commission filings from Edgar or on the fiche Q files from 1981 forward. In the event that we cannot identify the adoption date we assume that the firm classified its board at the initial public offering proxied by the first trading date on the Center for Research in Securities Prices (CRSP).

4.1. Sampling takeover attempts

Takeover attempts involving IRRC firms are obtained from the mergers and acquisitions database maintained by Securities Data Corporation (SDC). To account for multi-bid auctions and follow-on bidding

we sample transactions from SDC announced from two years prior (1988) through 2 years following (2004) the panel interval. Targets are matched to CRSP/Compustat GVKEY identifiers using reported SDC target CUSIPs. Given variation in SDC and Compustat CUSIP codes we verify positive matches comparing the SDC reported company name against the historical name structure on CRSP. For a subset of targets not matched by CUSIP, we match using the target corporation's name from SDC and the name structure on CRSP.

Our sample of 3,087 IRRC firms is associated with 1,390 merger and acquisitions transaction reports on SDC between 1988 and 2004. These deals are screened to include only deal forms coded as “mergers”, “acquisitions”, and “acquisitions of majority interest” and exclude spin-off “acquisitions” where the acquirers are the firm's own shareholders. To discriminate between the economic effects of initial and follow-on bids, we define an auction sequence following [Bates and Lemmon \(2003\)](#). A bid is considered an initial bid if no bid for the target is identified for 365 calendar days before the announcement. Bids are part of an auction if announced within 365 calendar days of a prior bid announcement for a target. In the event that there is no follow-on bidding, an auction consists of only a single initial bid. We retain initial bids announced between 1990 and 2002. To ensure that we observe a complete auction sequence, we retain follow-on bids announced after 2002 provided the auction was initiated before the end of 2002. Initial bids in each auction are matched to the merged IRRC/Compustat data by calendar year. The final data set consists of 757 initial bids and 103 follow-on bids (860 bids in total).

[Table 1](#) summarizes a subset of the governance characteristics compiled by IRRC for each sample year that corresponds to the publication of an IRRC volume. We refer readers to [Appendix A](#) in [Gompers, Ishii, and Metrick \(2003\)](#) for further detail regarding the governance features covered by IRRC. The governance characteristics in [Table 1](#) are delineated by whether or not they are included in the entrenchment index compiled by [Bebchuk, Cohen, and Ferrell \(2004\)](#). The majority of firms (56.5% to 60%) utilize a classified board. Among the other entrenchment provisions, poison pills and golden parachutes are also adopted by a majority of firms, while supermajority provisions and limits to bylaw and charter amendments are less

Table 1

Corporate governance provisions

The table summarizes a subset of the governance characteristics for 10,121 firm-year observations obtained from the Investor Responsibility Research Center (IRRC) volumes published for the years 1990, 1993, 1995, 1998, 2000, and 2002. This sample includes US public corporations covered in at least one of the volumes and includes 3,121 unique firms. Firm-year observations are screened to include only observations in which the book value of total assets for a firm, matched in calendar time to the publication of the IRRC volume, is non-missing from Compustat.

	1990	1993	1995	1998	2000	2002
Number of observations	1,396	1,445	1,493	1,883	1,696	1,849
Entrenchment provisions						
Board classification	0.565	0.582	0.595	0.575	0.580	0.600
Poison pill	0.513	0.535	0.530	0.512	0.544	0.550
Super majority	0.169	0.182	0.173	0.142	0.154	0.158
Limits to bylaw amendment	0.142	0.155	0.156	0.176	0.194	0.222
Limits to charter amendment	0.032	0.031	0.031	0.029	0.032	0.024
Golden parachute	0.497	0.527	0.535	0.554	0.637	0.674
Other provisions						
Limited special meetings	0.239	0.287	0.310	0.331	0.365	0.479
Limited written consent	0.242	0.282	0.311	0.318	0.343	0.437
Blank check	0.766	0.794	0.847	0.874	0.890	0.903
Dual share classes	0.076	0.082	0.083	0.107	0.119	0.118
Business combination law	0.850	0.884	0.889	0.903	0.913	0.916
No cumulative vote	0.172	0.156	0.142	0.117	0.108	0.094
Fair price law	0.329	0.337	0.324	0.262	0.251	0.209
G index	8.933	9.184	9.284	8.748	8.971	9.034
Delaware incorporation	0.479	0.505	0.527	0.574	0.575	0.605

pervasive. Of the other governance provisions, blank check preferred stock and business combination laws are the most prevalent features. The average value of the Gompers, Ishii, and Metrick (2003) G-index, a cumulative index of 24 governance provisions, is about nine. Between 48% and 60% of the firms are incorporated in Delaware in a given year. In an unreported analysis we examine intra-firm variation in the G-index and its associated provisions. The average standard deviation of the G-index in our sample is 0.54 indicating that elements of the G-index are stable within firms over time. The intra-firm variation in the G-index observed in our sample is driven mainly by variation in three provisions: golden parachutes (0.121), poison pills (0.083), and limits on special meetings (0.056).

Panel A of Table 2 presents summary statistics of deal characteristics obtained from SDC transaction summaries, delineated by target board structure. The statistical significance of differences in means (medians) between targets with and without classified boards is defined by asterisks in the far right column. Firms with a classified board receive 428 initial takeover bids during the sample period corresponding to 3.60% of the firm–year observations, compared with 329 bids or 3.86% of the firm–year observations for firms with a single class of directors. Follow-on bids in an auction sequence are slightly more common for firms with classified boards. Specifically, 13.01% of bids (64) involving classified targets are follow-on bids in an auction, while 10.59% (39) are follow-on bids for targets with a single class of directors. The average (median) number of days from the announcement to the conclusion of an auction is 171.05 days (134 days) for targets with a classified board and 171.61 days (126 days) for targets with a single class of directors.

Differences in mean (median) deal value and toeholds are not significantly different from zero. Bid hostility is observed at twice the rate for targets with classified boards (10.43%) compared with targets with a single class of directors (4.94%). Consistent with the higher rate of hostility, bids for targets with classified boards are less likely to involve termination fees or bidder equity and more likely to be tender offers. Approximately 71% of the initial bids for targets with classified boards are completed, somewhat lower than the 76% completion rate for targets with a single class of directors. With the exception of bid hostility, however, none of the differences in bid characteristics or completion rates is significantly different from zero across the two groups.

Panel B of Table 2 summarizes accounting and ownership characteristics of the target firms in our sample computed in the fiscal year prior to the initial bid. Accounting data are compiled from Compustat and ownership data are collected from the firms' proxy statements. Targets with classified boards are larger in terms of total assets compared with targets with a single class of directors. Differences in debt-to-assets are not significant. We measure Tobin's Q as the market-to-book assets ratio for the firm. The mean value of Tobin's Q for targets with classified boards is 1.50, significantly lower than the corresponding value for targets with a single class of directors (1.67). Differences in median Q are not significant.

The mean (median) CEO ownership of targets with classified boards is 2.32% (0.52%) compared with 3.89% (0.55%) for CEOs of targets with a single class of directors. A similar difference is observed for the total ownership of all officers and directors. The average (median) ownership of officers and directors is 9.24% (4.07%) of targets with classified boards, compared with 11.83% (4.70%) of those without. The differences in ownership characteristics are statistically different from zero with the exception of the median CEO ownership for the two groups of firms. Finally, we also identify whether a target's CEO serves as the chairman of the board, commonly referred to as CEO duality. This feature is observed in 68.72% of the targets with classified boards and 68.20% of targets with a single class of directors with the difference between the subsamples insignificantly different from zero.

5. Target board classification and the outcomes of observed takeover bids

In this section we examine whether board classification of targets is systematically associated with the outcomes of observed takeover bids. First, we investigate whether board classification is correlated with the likelihood that a bid, once initiated, results in a successful change-in-control event. Second, we consider whether board classification facilitates self-dealing by target managers in the context of completed bids. Finally, we examine whether target board classification is reliably associated with the wealth effects realized by target and bidding shareholders during change-in-control events.

Table 2

Summary of bid and target firm characteristics in merger bids 1990–2002

The table summarizes transaction characteristics of 860 acquisition bids announced and either completed or withdrawn between 1990 and 2002 for firms covered by Investor Responsibility Research Center. Panel A summarizes bid frequency, bid rank, and general bid characteristics from Securities Data Corporation (SDC). Bid frequency and characteristics are reported only for first bids in auction sequences (757 bids). An auction is composed of all bids for a target beginning with the first observed bid and including any successive bids made within 365 calendar days of a prior announcement. Deal value is reported by SDC. Toehold is the bidding firm's ownership in the target at the announcement date. Bids receive a hostile classification from SDC if target managers rebuff the offer. A bid is equity if any portion of compensation paid to target shareholders includes bidder equity. Target termination fee is an indicator variable equal to one if the bid includes a target payable termination fee. Tender offer is an indicator variable equal to one for initial bids structured as a tender offer and zero otherwise. Bid completion is an indicator variable equal to one when for completed initial bids and zero if the initial bid is withdrawn. Target firm characteristics are reported in Panel B and are computed using firm data from the fiscal year immediately preceding an initial bid in an auction. Firm size is the log of total assets, and debt includes short- and long-term debt issues. Tobin's Q is proxied by market-to-book measured as total assets minus book equity plus market equity divided by total assets for the target. Ownership is measured as the proportional holding of equity cash flow rights for target chief executive officers (CEOs) and officers and directors measured in the fiscal year prior to an initial bid. The positions of the CEO and Chairman of the board are identified in fiscal year prior to an initial bid. Where appropriate we report statistical medians in parentheses and the number of observations for missing variables in brackets. The symbols *, **, and *** indicate that the subsample means (medians) for the classified board subsample is significantly different from that of the no-classified board subsample at the 10%, 5%, and 1% level, respectively.

	Targets with a classified board	Targets without a classified board
<i>Panel A Bid characteristics</i>		
Bid frequency	3.60%	3.86%
Bid rank in auction sequence:		
1	428	329
2	55	33
3	7	6
4	1	0
5	1	0
Number of days in auction	171.05 (134)	171.61 (126)
Deal value: (millions of dollars)	3,677.28	3,671.98
[Number of observations]	(1,088.40) [392]	(951.10) [305]
Toehold at announcement	1.12% (0.00)	1.58% (0.00)
Bid hostility	10.43%	4.94%***
Proportion of equity bids	53.50%	61.42%
Target payable termination fee	51.64%	57.14%
Proportion of bids structured as tender offer	19.16%	15.20%
Bid completion	71.96%	76.29%
<i>Panel B: Target characteristics</i>		
Size (log total assets)	7.32 (7.16)	7.09** (6.84)**
Debt/assets	0.29 (0.26)	0.27 (0.25)
Market-to-book (Tobin's Q)	1.50 (1.22)	1.67** (1.23)
CEO ownership	2.32% (0.52%) [423]	3.89% (0.55%) [317]
Officer and director ownership	9.24% (4.07%) [426]	11.83%** (4.70%)* [321]
CEO is also chairman (CEO duality)	68.72% [422]	68.20% [327]

5.1. Bid and auction completion

As shown in Table 2, initial bids for targets with classified boards elicit a hostile response at roughly twice the rate observed for initial bids involving targets with a single class of directors. A plausible explanation for the positive relation between board classification and bid hostility is that entrenched managers utilize the classified-board structure to repel change-in-control bids and preserve their private benefits of control (e.g., Bebchuk, Coates, and Subramanian, 2002). Alternatively, consistent with Stulz (1988) and Schwert (2000) bid hostility could simply reflect the willingness and ability of target management to negotiate publicly for higher bid values.

To consider these divergent perspectives, Table 3 reports the results of logistic regressions modeling the likelihood of completing a bid or auction as a function of target board structure, bid disposition, and other governance, bid, and target characteristics. Of the 757 initial bids 559 (73.8%) are completed, while 590 (78%) of the auctions ultimately result in a completed transaction. We report marginal effects for coefficients in brackets, which represent the change in the probability of bid or auction completion for a change in an indicator variable from zero to one or a one standard deviation change in a continuous variable, holding all other variables constant at their mean values. For interacted variables we compute the marginal effects following Ai and Norton (2003) and report the mean value of the marginal effect. For the statistical significance of the coefficient estimates we report *p*-values based on robust standard errors in parentheses. Missing firm-level data impart sample restrictions across the specifications.

Model 1 of Table 3 examines the likelihood that an initial bid is completed as a function of the target firm's governance characteristics and bid hostility. We model the effects of board classification with an indicator variable equal to one for targets with a classified board and zero otherwise. We aggregate the remaining governance characteristics using a net G-index computed as the Gompers, Ishii, and Metrick (2003) governance index minus one for targets with a classified board and equal to the G-index for targets without classified boards. The model also incorporates control variables for target size (log of total assets), leverage, and the market-to-book ratio, all measured in the fiscal year prior to the takeover bid.

The coefficient on the classified board variable in Model 1 is insignificantly different from zero, indicating that the likelihood of observing a completed initial bid is equivalent for targets with and without classified boards. Notably, the net G-index is also uncorrelated with the likelihood of completing a bid, indicating that indexed governance features commonly associated with managerial entrenchment are not reliably associated with the likelihood of initial bid completion. In an otherwise identical unreported specification we replace the net G-index with the independent elements of the entrenchment index. None of the coefficients on board classification or the other elements of the entrenchment index are statistically significant in this specification. The elements of the entrenchment index are also not jointly significant.

Model 1 of Table 3 also includes an indicator variable equal to one for initial bids that are met with a hostile response by target management, as well as an interaction term that isolates the joint effect of board classification and hostility on the likelihood of completion. The negative and significant (*p*-value < 0.01) coefficient on hostility suggests that hostile bids are 34.3% less likely to be completed relative to unsolicited or friendly bids. The term interacting hostility and target board classification is negative (*p*-value = 0.09) and the effect is economically large. The incremental effect of a classified board in the context of a hostile bid suggests an additional 24% reduction in the likelihood of initial bid completion for this subset of target firms. None of the coefficients on the control variables are significantly different from zero.

Model 2 incorporates additional controls for deal characteristics, including the bidder toehold, indicator variables equal to one for deals with target payable termination fees, tender offers, and equity bids as well as target officer and director ownership and CEO duality. Officer and director ownership provides a measure of the direct incentives of target managers to accept bids. Bange and Mazzeo (2004) find that targets characterized by CEO duality are less likely to engage in public negotiations with a bidder but are more likely to be involved in completed transactions. Similar to results reported in Bates and Lemmon (2003), bids structured as tender offers, bids involving target payable termination fees, and equity bids are more likely to be completed. The coefficient estimates on bidder toeholds, ownership by officers and directors, and CEO duality are not statistically significant. In unreported specifications we replace officer and director ownership with CEO ownership, the coefficient of which is also insignificantly different from zero. The fundamental

Table 3

Logistic regressions modeling the completion of an initial acquisition bid or auction

The table reports logistic regression modeling the likelihood that an initial bid or auction in the sample is completed. The sample consists of 757 initial merger bids and auctions for targets between 1990 and 2002 for firms covered in the Investors Responsibility Research Center handbook with total assets data available on Compustat. In each model the dependent variable is an indicator equal to one if an initial bid (or auction in Model 3) is ultimately completed and is set equal to zero otherwise. Target classified board is an indicator variable equal to one if the target firm employs the governance feature. The net G-index is the G-index reported by Gompers, Ishii, and Metrick (2003) minus one if the firm employs a classified board. Bids receive a hostile classification from Securities Data Corporation if target managers reject the offer. Target characteristics are computed using firm data from the fiscal year immediately preceding an initial bid in an auction. Firm size is the log of total assets, and debt includes long-term debt and current maturities. Tobin's Q is proxied by the market-to-book assets ratio measured as total assets minus book equity plus market equity divided by total assets for the target. Toehold is the bidder's ownership stake in the target at the announcement date. Target termination fee is an indicator variable equal to one if the bid includes a target payable termination fee. Tender offer is an indicator variable equal to one if the initial bid is structured as a tender offer. A bid is equity if any portion of compensation paid to target shareholders includes bidder equity. Ownership is measured as the proportional holding of equity cash flow rights for target officers and directors measured in the fiscal year prior to an initial bid. The position of the chief executive officer (CEO) and chairman of the board are identified in fiscal year prior to an initial bid. p -Values based on robust standard errors are in parentheses, and marginal effects computed at the mean values of the independent variables are provided in brackets. Marginal effects are the change in the probability of completing an acquisition bid for a one standard deviation change in a continuous variable or a shift from zero to one for an indicator variable. For interacted variables we report the mean interaction effect computed as in Ai and Norton (2003).

	Model 1	Model 2	Model 3
	First bids only	First bids only	Auctions
Bidding interval			
Number of observations	750	733	733
Intercept	1.286 (0.019)	0.657 (0.314)	2.259 (0.001)
Target classified board	0.020 (0.920) [0.004]	0.181 (0.409) [0.029]	0.113 (0.628) [0.016]
Net G-index	0.013 (0.725) [0.002]	-0.036 (0.424) [-0.006]	0.013 (0.753) [0.002]
Hostile	-1.510 (0.002) [-0.343]	-1.011 (0.108) [-0.201]	-1.538 (0.004) [-0.303]
Hostile * classified board	-1.076 (0.090) [-0.240]	-1.555 (0.041) [-0.335]	-0.422 (0.506) [-0.067]
Size (log total assets)	-0.042 (0.452) [-0.008]	-0.114 (0.068) [-0.018]	-0.119 (0.062) [-0.017]
Debt/assets	-0.316 (0.409) [-0.059]	-0.350 (0.424) [-0.056]	-0.681 (0.120) [-0.096]
Market-to-book (Tobin's Q)	0.171 (0.200) [0.032]	-0.113 (0.360) [-0.018]	0.076 (0.567) [0.011]
Toehold		0.015 (0.287) [0.002]	
Target payable termination fee		1.064 (0.000) [0.177]	
Tender offer		1.649 (0.000) [0.192]	
Stock deal		1.914 (0.000) [0.334]	

Table 3 (continued)

	Model 1 First bids only	Model 2 First bids only	Model 3 Auctions
Bidding interval			
Number of observations	750	733	733
Officer and director ownership		0.935 (0.250) [0.151]	0.929 (0.246) [0.130]
CEO duality		0.161 (0.474) [0.026]	0.211 (0.350) [0.030]
Chi-squared	56.67	145.31	50.62
(Probability chi-squared)	(0.000)	(0.000)	(0.000)
Pseudo r^2	0.084	0.249	0.075

conclusions regarding board classification, bid tenor, and the likelihood of initial bid completion derived from Model 1 remain unchanged in this specification.

Overall, the results in Models 1 and 2 of Table 3 indicate that board classification of targets is not reliably associated with the likelihood of initial bid completion in cases in which bids are not met with a hostile response by target management. In contrast, hostile bids are significantly less likely to be completed and the negative incremental effect associated with the interaction between board classification and bid hostility suggests that board classification is an effective mechanism for defeating change-in-control bids opposed by incumbent management. However, completion rates for initial bids overstate the likelihood that a target firm ultimately remains independent if initial bid hostility is associated with follow-on bidding. To assess the importance of this issue, Model 3 of Table 3 examines the likelihood that a target is ultimately acquired in an auction. In this specification we control for the tenor of the initial bid, characteristics of the target firm, officer and director ownership, and CEO duality, but exclude initial bid characteristics.

The determinants of auction completion generally resemble those of initial bids. The likelihood of auction completion is not significantly associated with target board classification, but it is 35.0% lower when an initial bid receives a hostile response. In contrast to the results in Models 1 and 2, however, the coefficient on the interaction between board classification and initial bid response is insignificantly different from zero. This indicates that the likelihood of completing an auction, when the initial bid is hostile, is equivalent for targets with and without classified boards. These results are consistent with the notion that bid resistance by targets with classified boards is likely to be a precursor to follow-on negotiation instead of an indication of target management's preference for independence.

Bebchuk, Coates, and Subramanian (2002) argue that the classified board mechanism is an especially potent anti-takeover device if the firm also employs a poison pill. Their reasoning is that the pill prevents the acquisition of target shares, relegating a potential acquirer to the uncertainty associated with a minimum of two proxy elections with no voting shares. However, as noted in Coates (2000) and Bebchuk and Cohen (2005), firms that do not currently have a pill in place can generally adopt one when confronted with a bid. In fact, Heron and Lie (2006) find that hostile acquisition targets with classified boards are more likely to adopt poison pill plans than firms with a single class of directors. This suggests that most change-in-control bids are effectively negotiated in the shadow of a poison pill and a joint poison pill and classified board defense for targets with classified boards. Nevertheless, to assess the independent and joint impact of a pre-existing poison pill and a classified board we compute in unreported results the completion rates for auctions in our sample conditioned on whether or not the target has a classified board, a poison pill, both, or neither immediately prior to the bid. We do not find that the likelihood that a target remains independent at the culmination of an auction is significantly different across the four subsets of target firms, regardless of the tenor of the initial bid. These results cohere with Heron and Lie (2006), who also report that the combination of a classified board and poison pill defense has an insignificant effect on the likelihood of observing a successful takeover bid.

In sum, consistent with the shareholder interest hypothesis, board classification allows incumbent managers to negotiate vigorously with prospective acquirers, increasing the incidence of hostility and multi-bid auctions,

Table 4

Post-transaction target chief executive officer (CEO) employment with acquirer, completed bids only

The table summarizes post-transaction employment status for target CEOs involved in 618 completed acquisition bids between 1990 and 2002 for firms covered in the Investors Responsibility Research Center handbook that also have total assets data available on Compustat. The samples are delineated in the first row by whether or not the target utilized a classified board structure. Indicator variables equal to one are constructed if the target CEO is an employee of the acquirer post-merger for a minimum of 6 months and if the target CEO is a director of the acquirer post-merger for at least six months. *p*-Values of the difference in the mean percentage of CEO retention (employee or director) are reported in the last column.

Post-transaction CEO employment	Targets without classified board	Targets with classified boards	<i>p</i> -Value for difference
Target CEO becomes an employee of acquirer	37.36%	37.54%	0.64
Target CEO becomes a director of acquirer	32.60%	38.71%	0.12
Number of observations	274	344	

while not perceptibly changing the likelihood that an initial bid ultimately yields a successful change-in-control transaction.

5.2. Auction completion and negotiated benefits for target management

Although board classification does not increase the likelihood that a target ultimately remains independent, it is plausible that it endows target managers with the leverage to negotiate with acquirers for self-serving side payments in completed transactions. For example, Hartzell, Ofek, and Yermack (2004) and Wulf (2004) find that target managers often receive additional benefits, negotiated directly with acquirers, in completed change-in-control transactions, the most prevalent being post-acquisition employment with an acquirer. To consider this possibility, we identify instances in which target CEOs are employed by acquirers following successful change-in-control transactions. We define post-acquisition employment as employment for a minimum of six months following the dissolution of the target determined using the 10 K and proxy filings of the acquiring firm and Factiva searches on the target CEO's name over a 48-month period following the completion of the deal.

The post-acquisition employment of target CEOs is summarized in Table 4. Of the 618 completed auctions in our sample, CEOs of acquired firms with classified boards become an employee of the acquirer following 37.54% of the transactions. This is insignificantly different from the employment rate of 37.36% for the CEOs of acquired targets with a single class of directors (*p*-value = 0.64). CEOs of targets with classified boards become directors of the acquiring firm following 38.71% of the transactions, a slightly higher rate than the 32.60% incidence observed for the CEOs of targets with a single class of directors, although the difference is not statistically significant (*p*-value = 0.12). These results do not suggest that board classification is associated with a higher rate of self-dealing by target managers, as proxied by their post-acquisition employment in the acquiring firm.

5.3. Board classification and shareholder wealth effects associated with takeover bids

Despite the evidence concerning post-acquisition employment, incumbent management could use board classification to negotiate other (unobserved) private benefits in merger transactions at the expense of target shareholders. Alternatively, the classified board mechanism could facilitate bargaining on behalf of target shareholders. To evaluate whether board classification of target firms moderates shareholder welfare in takeover bids, we estimate changes in target and bidder shareholder wealth at the announcement of initial bids and over auction intervals. Announcement period cumulative abnormal returns (CARs) are computed as the firm's return minus the return on the CRSP value-weighted NYSE/AMEX/Nasdaq index cumulated over the three trading day period $\{-1, +1\}$ relative to the bid announcement. Announcement period CARs are estimated only for initial bids with non-missing returns data over the event window yielding a sample of 749 announcement CARs for targets and 583 for the publicly traded bidders in our sample. We estimate auction

CARs to target shareholders as daily net-of-market returns cumulated from 42 trading days prior to the initial bid and ending either one day after the withdrawal of the final bid or on the effective date of the acquisition.

Table 5 summarizes the results of ordinary least squares regressions modeling target and bidder returns. These specifications control for bidder toeholds, initial bid hostility, bid or auction completion, tender offers, and equity bids. Target firm variables include a classified board indicator and controls for the net G-index, firm size, market-to-book, leverage, and pre-bid stock price performance measured over the 40-day period $\{-42, -2\}$ prior to the bid announcement. In regressions of auction CARs, bid and target firm characteristics coincide with the initial bid. All specifications include year fixed effects (1990 is the excluded year).

Models 1 and 2 of Table 5 summarize regressions of target announcement period CARs. In both models the coefficient associated with target board classification is insignificantly different from zero as is the coefficient on the net G-index. The overall effect of hostility on target announcement CARs, however, is substantial. The coefficient in Model 1 indicates that target CARs are 6.2% (p -value = 0.022) higher for hostile bids. Model 2 estimates the joint effect of classification and hostility on target announcement CARs. The coefficient on the interaction term is insignificantly different from zero, suggesting that the announcement period CARs to target shareholders in hostile bids are similar for firms with and without classified boards. Consistent with other studies, target announcement CARs are higher in tender offers and are negatively correlated with bidder toeholds, equity bids, target firm size, the market-to-book ratio, and pre-bid target returns.

In Model 3 of Table 5 we estimate the determinants of target auction CARs. Auction CARs incorporate the wealth effects associated with pre-bid deal anticipation as well as the returns to any follow-on bidding not anticipated at the time of the announcement. Target auction CARs do not vary with target board classification but are significantly higher if the initial bid receives a hostile response. The interaction term again suggests that the effect of initial bid hostility on target abnormal returns is not significantly different for targets with a classified board. Overall, we find no evidence that board classification is reliably correlated with the returns to target shareholders.

Model 4 of Table 5 examines the determinants of announcement period bidder CARs. If board classification is systematically used by target management to negotiate for private benefits in exchange for lower takeover premiums, then bidding shareholders should earn higher returns in these deals. In contrast to this prediction, the coefficient estimate on board classification is negative and significant, indicating that announcement period returns to bidding shareholders are 2.7% (p -value < 0.01) lower when the bid involves a target with a classified board. The coefficient associated with the net G-index and bid hostility are insignificantly different from zero, as is the coefficient on the interaction term estimating the joint effect of board classification and hostility on the returns to bidding shareholders. These results are not consistent with the notion that classification, on average, facilitates self-dealing by incumbent managers at the expense of target shareholders. Instead, the findings indicate that, consistent with the shareholder interest hypothesis, bidders fare worse when negotiating takeover bids with targets with a classified board structure.

To provide additional evidence concerning the welfare of transaction participants, we follow Bates, Lemmon, and Linck (2006) and examine the relative distribution of transaction surplus between bidding and target shareholders in completed deals. To avoid measurement issues arising from follow-on bids, we limit the sample to first bids in an auction sequence and completed bids. We also exclude transactions in which total wealth losses exceed \$2 billion. As in Malatesta (1983), we estimate the abnormal change in market value by multiplying the pre-bid market value of bidding and target firms (as of day -2 relative to the announcement day) by the announcement CAR.

In unreported results we find that the average total wealth gain to target shareholders at the announcement of a bid is \$249.5 m for targets with classified boards and \$312.5 m for targets with a single class of directors. Consistent with the results reported in Table 5, the wealth gains of target shareholders are not statistically different between firms with and without a classified board. Bidding shareholder wealth effects, however, are significantly different for the two subsamples. Bidding shareholders, on average, lose \$94.37 m at the announcement of a bid for a target with a classified board but gain \$197.4 m at the announcement of a bid for a target with a single class of directors. These results indicate that, consistent with the shareholder interest hypothesis, board classification by targets is associated with a larger proportional distribution of total bid surplus for target shareholders relative to the distributions that obtain for targets represented by a single class

Table 5

Ordinary least squares (OLS) regressions on target and bidder announcement and auction cumulative abnormal returns (CARs)

The table presents OLS regressions of target CARs measured at the announcement of initial bids and over an auction sequence. Announcement CARs are measured as the firm's stock return less the return on the Center for Research in Security Prices (CRSP) value-weighted index beginning one trading day prior to the initial bid announcement and ending one day following the announcement date. Auction CARs are computed as the difference between the firm's stock return less the return on the CRSP value-weighted index cumulated from 42 trading days prior to the announcement of the initial bid to either one day after the withdrawal of the final bid in an unsuccessful auction or through the effective date of the acquisition for successful auctions. Target classified board is an indicator variables equal to one if the target firm employs the governance feature. The net G-index is the G-index reported by Gompers, Ishii, and Metrick (2003) minus one if the firm employs a classified board. Bids receive a hostile classification from Securities Data Corporation (SDC) if target managers rebuff the offer. A bid is equity if any portion of compensation paid to target shareholders includes bidder equity. Tender offer is an indicator variable equal to one obtained from SDC for those deals announced via a tender offer. Toehold is the bidder's ownership stake in the target at the announcement date. Target termination fee is an indicator variable equal to one if the bid includes a target payable termination fee. Target characteristics are computed using firm data from the fiscal year immediately preceding an initial bid in an auction. Firm size is the log of total assets, and debt includes long-term debt plus current maturities. Tobin's Q is proxied by the market-to-book assets ratio measured as total assets minus book equity plus market equity divided by total assets for the target. Pre-bid target abnormal return is measured as the rolling mean monthly abnormal return over the 12 months prior to the calendar year of the observation in the panel. p -Values based on robust standard errors are in parentheses.

Return estimate	Model 1	Model 2	Model 3	Model 4
Daily CAR interval	Target announcement CAR (-1, +1)	Target announcement CAR (-1, +1)	Target auction CAR (-42,end)	Bidder announcement CAR (-1, +1)
Number of observations	743	743	743	579
Intercept	0.253 (0.000)	0.254 (0.000)	0.150 (0.139)	-0.006 (0.833)
Target classified board	-0.011 (0.483)	-0.006 (0.698)	0.014 (0.685)	-0.027 (0.002)
Net G-index	0.004 (0.170)	0.004 (0.169)	0.005 (0.305)	-0.001 (0.804)
Hostile	0.062 (0.022)	0.108 (0.027)	0.168 (0.019)	-0.023 (0.379)
Hostile * classified board		-0.067 (0.214)	-0.055 (0.499)	0.032 (0.202)
Deal (auction) status (1 = completed, 0 = withdrawn)	0.067 (0.002)	0.065 (0.003)	0.383 (0.000)	0.014 (0.324)
Stock offer indicator	-0.056 (0.007)	-0.056 (0.007)	-0.068 (0.059)	-0.040 (0.000)
Tender offer indicator	0.092 (0.000)	0.092 (0.000)	0.048 (0.255)	0.019 (0.081)
Bidder toehold	-0.003 (0.005)	-0.003 (0.005)	-0.004 (0.050)	-0.001 (0.378)
Target termination fee	0.017 (0.417)	0.018 (0.398)	-0.034 (0.322)	0.004 (0.676)
Size (log total assets)	-0.017 (0.001)	-0.017 (0.001)	-0.020 (0.049)	-0.137 (0.006)
Debt/assets	-0.010 (0.790)	-0.008 (0.821)	0.050 (0.533)	-0.002 (0.868)
Market-to-book (Tobin's Q)	-0.022 (0.012)	-0.022 (0.012)	-0.035 (0.055)	0.001 (0.956)
Pre-bid target abnormal return (%)	-0.178 (0.000)	-0.175 (0.000)		
Year Indicators	Yes	Yes	Yes	Yes
F -statistic (p -value)	6.20 (0.000)	6.01 (0.000)	8.10 (0.000)	3.41 (0.000)
Adjusted r^2	0.180	0.181	0.203	0.142

of directors. We caution against a strong interpretation of this result, however, as bidder returns could also reflect revisions in the market's assessment of the stand-alone value of the bidder.

6. Board classification and the likelihood of change-in-control bidding

Bid deterrence is a final dimension along which board classification can moderate the observed characteristics of the market for corporate control. A rational potential acquirer, anticipating that target managers use board classification to oppose a takeover or negotiate for a larger proportion of bid surplus, will simply refrain from bidding if the expected costs associated with the takeover exceed the expected benefits. In this section we evaluate the potential bid deterrence effects of board classification and estimate the impact of bid deterrence on firm value.

6.1. The likelihood of receiving a takeover bid

In Table 6 we summarize the results of probit regressions estimating the likelihood of a takeover bid for a firm-year observation as a function of the firm's governance provisions. The regressions also include controls for firm size, market-to-book, leverage, and abnormal performance measured as the rolling mean monthly net-of-market return on the firm's stock computed over the 12 months prior to the calendar year of the observation in the panel.⁶ The regressions also control for industry using the 30 industry classification of Fama and French and year fixed effects (1990 is the excluded year). Missing firm-level data impart sample restrictions across the specifications.

Models 1 and 2 of Table 6 summarize the results of individual probit models with dependent variables equal to one for firm-year observations involving an initial takeover bid and zero otherwise. Statistical significance is evaluated using robust clustered standard errors adjusted for non-independence of observations by firm, and *p*-values assessing statistical significance are reported in parentheses. Marginal effects computed at the mean values of the independent variables are reported in brackets. In Model 1, the coefficient on the classified board indicator is negative and statistically different from zero (*p*-value = 0.048). The marginal effect suggests that firms with classified boards are 0.5% less likely to receive a bid in a particular year relative to comparable firms with a single class of directors. Coefficients on the control variables indicate that larger firms and firms with higher market-to-book ratios and stock returns are less likely to receive takeover bids, while leverage increases the likelihood of becoming a bid target. We control for other governance characteristics in Model 1 using the net G-index. Notably, the coefficient estimate for the net G-index is positive and statistically significant (*p*-value < 0.01). Thus, controlling for board classification, firms with more anti-takeover provisions are more likely to receive a takeover bid. However, the marginal effect associated with this result is economically small. A one standard deviation increase in net G-index is associated with a 0.1% increase in the likelihood of receiving a bid.

To examine the independent effects of other governance characteristics on the likelihood of receiving a takeover bid, Model 2 of Table 6 incorporates the individual elements of the Bebchuk, Cohen, and Ferrell (2004) entrenchment index. In this specification, the coefficient on board classification remains negative and statistically significant, and the marginal effect on the likelihood of a takeover bid is -0.6%. Poison pills have an insignificant impact on the likelihood of takeover bidding, a result that differs from Comment and Schwert (1995), who find that poison pills are associated with an increase in the likelihood of a takeover bid. We infer that this difference is likely a function of the relative proliferation of poison pill provisions during our sample period, as well as the ease with which firms without a pill might adopt one during a change-in-control bid. Of the remaining governance characteristics, the presence of a golden parachute has the most significant impact on the likelihood of receiving a bid, increasing it by 1.8%. Golden parachutes are often thought to decrease the incidence of takeover bids by increasing transaction costs for acquirers, however, the positive coefficient estimate instead suggests that the adoption of golden parachutes could occur in anticipation of takeover bidding. None of the other components of the entrenchment index has a significant effect on the likelihood of

⁶Several prior papers estimate takeover likelihoods as a function of firm-specific characteristics and anti-takeover provisions including Ambrose and Megginson (1992), Comment and Schwert (1995), Hasbrouck (1985), and Palepu (1986).

Table 6

Probit regressions modeling the probability of being a bid target in a particular year

The table reports probit regressions modeling the likelihood that a firm receives an initial takeover bid in a given year as a function of governance and firm characteristics. Models 1 and 2 estimate the likelihood of a takeover attempt, while Model 3 is a bivariate probit simultaneously estimating the likelihood of a takeover attempt and the likelihood that a sample firm maintains a classified board. The full sample consists of 20,335 firm-year observations between 1990 and 2002 for firms covered in the Investors Responsibility Research Center (IRRC) handbook that also have total assets data available on Compustat. The dependent variable in the regression is set equal to one for firm years in which a firm receives a takeover bid and is set equal to zero otherwise. Target classified board, poison pill, super majority, limits to bylaw amendment, limits to charter amendment, and golden parachute are indicator variables equal to one if the target firm employs these governance feature as reported by IRRC. The net G-index is the G-index reported by Gompers, Ishii, and Metrick (2003) minus one if the firm employs a classified board. Target characteristics are computed using firm data from the fiscal year immediately preceding an initial bid in an auction. Firm size is the log of total assets, and debt includes long-term debt plus current maturities. Tobin's Q is proxied by the market-to-book assets ratio measured as total assets minus book equity plus market equity divided by total assets for the target. Pre-bid target abnormal return is measured as the rolling mean monthly abnormal return over the 12 months prior to the calendar year of the observation in the panel. Board size is the log of the total number of directors on the target board preceding the initial acquisition announcement. p -Values based on robust standard errors adjusted for clustering at the firm level are in parentheses, and marginal effects computed at the mean values of the independent variables are provided in brackets. Marginal effects reflect the change in the probability of receiving an acquisition bid for a one standard deviation change in a continuous variable, or a shift from zero to one for an indicator variable.

Number of observations	Model 1	Model 2	Model 3	
	19,465	19,465	Classified board	Takeover target
Estimated likelihood(s)	Takeover target	Takeover target	Classified board	Takeover target
Intercept	−1.528 (0.000)	−1.588 (0.000)	0.027 (0.921)	−1.850 (0.000)
Target classified board	−0.076 (0.048) [−0.005]	−0.083 (0.031) [−0.006]		−0.259 (0.047) [−0.010]
Net G-index	0.016 (0.030) [0.001]			0.029 (0.000) [0.001]
Target poison pill		−0.009 (0.825) [−0.001]		
Super majority		−0.067 (0.174) [−0.004]		
Limits to bylaw amendment		−0.018 (0.708) [−0.001]		
Limits to charter amendment		0.152 (0.110) [0.011]		
Golden parachute		0.280 (0.000) [0.018]		
Size (log total assets)	−0.069 (0.000) [−0.005]	−0.064 (0.000) [−0.004]	−0.030 (0.151)	−0.059 (0.000) [−0.002]
Debt/assets	0.147 (0.015) [0.010]	0.120 (0.051) [0.008]	−0.084 (0.500)	0.194 (0.053) [0.006]
Market-to-book (Tobin's Q)	−0.091 (0.000) [−0.006]	−0.081 (0.000) [−0.005]	−0.036 (0.016)	−0.101 (0.000) [−0.004]
Pre-bid target abnormal return (percent)	−1.829 (0.062) [−0.123]	−1.807 (0.064) [−0.118]	0.883 (0.206)	−2.653 (0.022) [−0.088]
Board size (log)			0.204 (0.000)	
Industry indicators	Yes	Yes	Yes	Yes

Table 6 (continued)

Number of observations	Model 1 19,465	Model 2 19,465	Model 3 18,293	
Estimated likelihood(s)	Takeover target	Takeover target	Classified board	Takeover target
Year indicators	Yes	Yes	Yes	Yes
Wald test of $\text{Rho} = 0$ (Probability chi-squared)			2.019 (0.155)	
Chi-squared (Probability chi-squared)	402.13 (0.000)	459.61 (0.000)		4,882.10 (0.000)
Pseudo r^2	0.066	0.075		

a takeover bid for the firm. Statistical tests (unreported) indicate that the coefficient estimates associated with the individual elements of the entrenchment index are not jointly significant in Model 2.

We are aware of the potential for an endogenous relation between the likelihood of a bid and the decision to adopt anti-takeover provisions such as poison pills (e.g., [Comment and Schwert, 1995](#)) or a classified board structure. Poison pills are a relatively new bid defense, only coming into general usage following the 1985 Delaware Chancery Court decision in *Moran v. Household International*. In contrast, board classification is an established governance arrangement incorporated into Delaware law as early as the 19th century. Furthermore, classification is typically adopted by firms when they go public (e.g., [Field and Karpoff, 2002](#)) instead of in response to some imminent takeover threat. For example, in our sample we find that for the 428 bids involving firms with a classified board, the average length of time between the adoption date (or IPO date) of board classification and the announcement of a change-in-control bid is 12.51 years, with only four firms adopting a classified board structure in the calendar year prior to an initial bid announcement. We therefore infer that board classification is not a mechanism adopted by managers anticipating a takeover bid.

A second concern is that firms adopting and maintaining classified boards might also be more likely to be the targets of takeover attempts. Despite our extensive use of control variables, if firms with a greater ex ante exposure to change-in-control bids are also more likely to maintain classified boards, estimated takeover likelihoods suffer from a self-selection bias and understate the deterrent effect of board classification. To address self-selection we follow the methodology outlined in [Greene \(2003\)](#) and estimate a bivariate probit model for the likelihood functions associated with the decision to adopt and maintain a classified board and the firm's receipt of a change-in-control bid, allowing for correlation in the estimation errors in the two equations. Board size provides a unique instrument in determining the likelihood of board classification. Our conjecture is that board classification reduces the transactions costs associated with nominating and electing a large slate of directors, while board size per se should not change the costs associated with a takeover attempt. Data on board size is obtained from IRRC for the years 1998–2002 and supplemented in earlier years with board data obtained from Compact Disclosure.⁷ Data for board size are missing for 2,042 firm-year observations.

Model 3 of [Table 6](#) summarizes the simultaneous estimation of the likelihood of board classification and a takeover bid. Consistent with our hypothesis, the likelihood of board classification is increasing in board size. The table also reports the results from a Wald test of whether the error correlation (ρ) between the two equations is equal to zero. The p -value associated with the Wald test is 0.155, providing weak evidence that accounting for self-selection is appropriate in this context. In the corresponding equation modeling takeover likelihood, the coefficient on board classification is negative and statistically significant (p -value = 0.047), indicating that board classification reduces the likelihood that a firm receives a takeover bid. In this specification the marginal effect of classification on the likelihood of receiving a change-in-control bid is -1.0%. The relative magnitude of the estimated effect is substantial in light of an observed bid frequency of 3.6% for the subsample of targets with classified boards. Given the evidence in [Table 6](#) we infer that bid deterrence is the primary channel through which classified boards alter a firm's exposure to the market for corporate control.

⁷We thank Jim Linck for providing us with the merged data set of board characteristics used in [Linck, Netter, and Yang \(2007\)](#).

6.2. Board classification, bid deterrence, and firm value

To gauge the economic significance of bid deterrence we use our estimate of the expected change in takeover activity to evaluate the commensurate implied change in market value associated with the elimination of a classified board structure. Unconditioned on the receipt of a bid, average Tobin's Q (proxied by market-to-book assets) in our panel is 1.94 for firms with a single class of directors and 1.75 for the subsample of firms with a classified board. This difference is consistent with other empirical studies including Faleye (2007) who finds that classification is associated with a 0.16–0.19 reduction in Tobin's Q . Bebchuk and Cohen (2005) do not report univariate statistics, however, in panel regressions they find that classification is associated with a 0.17 reduction in industry-adjusted Tobin's Q .

We assume that the observed market value of the firm reflects the present value of a series of cash flows obtained under incumbent management, as well as the expected cash flow improvements attributable to an acquirer. We assume that current management generates constant cash flows of x each year in perpetuity. However, if a takeover attempt occurs in year t , cash flows are expected to be improved to $y = x(1+k)$ in all future years, where k is a takeover premium that reflects the value of cash flow improvements attributable to the acquisition. For simplicity we also assume that all bids are completed and that value improvements and premiums are fully capitalized for target shareholders. Given a probability (p) that a takeover bid occurs in year (t), and a discount rate (r), the present value of the firm can be written as

$$V_0 = x \left(\frac{1+r}{r+p} \right) + \left(\frac{y}{r} \right) \left(\frac{p(1+r)}{r+p} \right). \quad (1)$$

In this framework the value of the firm is equivalent to a perpetual stream of cash flows under incumbent management [the first term in Eq. (1)], plus an additional premium resulting from the value improvements from an acquisition [the second term in Eq. (1)]. Restating the cash flow improvement (y) in terms of the bid premium (k), firm value is

$$V_0 = x(1+r) \left[\left(\frac{1}{r+p} \right) + \left(\frac{(1+k)}{r} \right) \left(\frac{p}{r+p} \right) \right]. \quad (2)$$

We normalize the book value of assets to one, which equates firm value as given in Eq. (2) with Tobin's Q .

We parameterize the model using observed premiums obtained from our sample of bids. The bid premium is computed as the final bid price per share from SDC divided by the target's share price 42 trading days prior to the initial bid, less one. Given missing data, premiums can be computed for 667 of the 757 initial bids in our sample. The average bid premium is 39.09% for firms with a classified board and 35.93% for firms with a single class of directors, although the difference in premiums is not significantly different from zero. We therefore assume that takeover bids yield a 39.09% premium for target shareholders in the model. We calibrate the model to the average Q of 1.75 for firms in the classified board subsample assuming a discount rate of 12% and an observed annualized probability of takeover of 3.6% for firms with classified boards. This yields a value for cash flow under incumbent management of 0.172.

The estimate of takeover deterrence associated with a classified board computed from the bivariate probit Model 3 in Table 6 is 1.0%, roughly twice the effect observed in Models 1 and 2. Increasing the likelihood of a takeover bid by 1.0% per year from the observed rate of 3.6%, the implied change in Tobin's Q associated with the elimination of deterrence is 0.03, suggesting that the average Q for the classified board subsample would be 1.78 if the boards of these firms were declassified. Thus under reasonable parameters, eliminating the deterrence effect associated with board classification increases the implied value of firms by only 1.1%, or approximately one tenth of the difference between the value of firms with and without a classified board structure. This inference is relatively insensitive to the parameters chosen. For example, a 50% increase in takeover premiums to 58.64% yields an increase in implied Q for firms with classified boards to 1.87 in the absence of bid deterrence which, again, is substantially below the average value of Tobin's Q for the subsample of firms with a single class of directors (1.94). Alternatively, tripling the imputed deterrence effect to 3.0%, raising the overall probability of acquisition for classified board firms to 6.6%, increases the average implied Tobin's Q , absent bid deterrence, to 1.83. We conclude that bid deterrence, while statistically significant, is

unlikely to account for the large differences in firm value that have commonly been attributed to the anti-takeover properties of classified boards.

6.3. Board declassification and takeover activity

Firms covered by IRRC rarely change their board structure, although anecdotal evidence suggests that declassification is occurring at an increasing rate. Of the 20,335 firm-year observations in our panel, 49 firms are identified as declassifying their board, while 78 classify their board. Nine of the 49 firms that declassified (18.37%) became the target of a takeover bid at some point up through the end of the calendar year 2002, and eight of these bids ultimately result in a completed transaction. Of the 49 firms that classified their board, 17 became the subject of takeover bidding (22.79%) and 13 of these bids are ultimately completed. These results are inconsistent with the notion that firms that declassify are subject to an extraordinary rate of takeover bidding. They also do not suggest that the decision to classify precludes subsequent takeover bidding. The small size of these subsamples precludes a more systematic analysis of takeover likelihoods or outcomes.

6.4. Charter-based versus bylaw-based classified boards

Board classification can be established either in the corporate charter or in the company's bylaws. [Bebchuk and Cohen \(2005\)](#) argue that charter-based staggered boards are potentially more effective as an anti-takeover device because the bylaws can be amended by shareholders, whereas the charter cannot be amended without board initiative. Notably, however, many firms restrict shareholder's ability to alter board characteristics established in the corporate bylaws without the consent of the board itself. In our sample, just over 90% of classified board provisions are based in the corporate charter, with the rest established in the bylaws. To assess the robustness of our findings to this distinction we repeat our analyses summarized in Sections 5.2, 5.3, and 6.1 using only charter-based classified boards to define board classification. All of the results are qualitatively identical to those reported using the more general definition of a classified board.

7. Summary and concluding remarks

Critics of board classification contend that the governance arrangement endows management with a device to dissuade value-increasing change-in-control bids, overcome unsolicited takeover attempts, or negotiate self-serving deals with friendly acquirers at the expense of target shareholders. This conjecture is frequently extended to support the notion that board classification is a causal antecedent to agency conflict in firms. An alternative perspective, ascribed to anti-takeover devices generally, suggests that classification is efficient in the context of corporate control events because it endows target managers with leverage sufficient to deter opportunistic bidding, negotiate for higher value bids, or pursue higher-value third-party suitors. In this paper we explore the veracity of these divergent views by examining the empirical relation between board classification, takeover activity, and transaction outcomes for a panel of firms between 1990 and 2002.

Conditioned on observing a bid, targets with classified boards are ultimately acquired at an equivalent rate as targets with a single class of directors, all else equal. An analysis of target CEO employment following completed bids does not suggest that managers of targets with classified boards are more likely to engage in self-dealing during negotiations with prospective acquirers. Target shareholder returns are equivalent in deals involving targets with a classified board relative to targets with a single class of directors. However, bidding shareholder returns are 2.7% lower at the announcement of a takeover bid for classified board targets. An analysis of the distribution of transaction surplus between target and bidding shareholders in completed deals indicates that target shareholders of firms with classified boards receive a larger proportional share of the total surplus to mergers relative to the target shareholders of firms with a single class of directors. Overall, the evidence is inconsistent with the notion that board classification is systematically associated with managerial entrenchment or self-dealing and suggests that classified boards could improve the relative bargaining power of target managers on behalf of their constituent shareholders.

We extend our analysis to consider the potential for bid deterrence associated with board classification. Controlling for possible endogeneity between a firm's decision to maintain a classified board and its exposure

to the market for corporate control, our empirical specification suggests that board classification reduces a firm's likelihood of becoming a takeover target by 1.0% which is a significant effect given an average annual rate of takeover bidding of 3.6% for firms with classified boards generally. Our analysis indicates, however, that bid deterrence can explain only a small fraction of the difference in firm value between firms with and without classified boards.

Several broad conclusions can be derived from our results. First, given our findings we question the empirical basis for recent calls to enhance the standard of regulatory or judicial scrutiny over transactions involving targets with classified boards. We also reiterate a concern that proposals to dismantle anti-takeover measures such as a classified board, specifically in the context of bid negotiation, are likely to lead to a reduction in bid quality for target shareholders. Second, our analysis suggests that bid deterrence provides, at best, an incomplete explanation for the differences in firm value commonly attributed to managerial entrenchment facilitated via board classification. Furthermore, given the observed bid outcomes for the transactions in our study, it remains unclear whether the takeover bids that might obtain in the absence of board classification would be efficient for target shareholders. Finally, board classification is just one of many factors commonly indexed when evaluating governance quality and shareholder rights in corporations. The results of this paper challenge the perception that these factors, either independently or as indexed, provide a reliable proxy for a firm's exposure to the market for corporate control. In closing, we note that the research to date has done little to empirically evaluate the potential shareholder benefits associated with classified board provisions or establish the causal nature of the relation between board classification and firm value. In this light we suggest a more circumspect policy approach be adopted by some governance practitioners and academics whose recent calls for the abolition of this common governance provision seem unwarranted and potentially damaging for shareholders.

References

- Ai, C., Norton, E.C., 2003. Interaction terms in logit and probit models. *Economic Letters* 80, 123–129.
- Ambrose, B.W., Megginson, W.L., 1992. The role of asset structure, ownership structure, and takeover defenses in determining acquisition likelihood. *Journal of Financial and Quantitative Analysis* 27, 575–589.
- Bange, M.M., Mazzeo, M.A., 2004. Board composition, board effectiveness, and the observed form of takeover bids. *Review of Financial Studies* 17, 1185–1215.
- Bates, T.W., Lemmon, M.L., 2003. Breaking up is hard to do? An analysis of termination fee provisions and merger outcomes. *Journal of Financial Economics* 69, 469–504.
- Bates, T.W., Lemmon, M.L., Linck, J.M., 2006. Shareholder wealth effects and bid negotiation in freeze-out deals: are minority shareholders left out in the cold? *Journal of Financial Economics* 81, 681–708.
- Bebchuk, L.A., Cohen, A., 2005. The costs of entrenched boards. *Journal of Financial Economics* 78, 409–433.
- Bebchuk, L.A., Coates, J.C., Subramanian, G., 2002. The powerful anti-takeover force of staggered boards: theory, evidence, and policy. *Stanford Law Review* 54, 887–951.
- Bebchuk, L.A., Cohen, A., Ferrell, A., 2004. What matters in corporate governance? Unpublished working paper. Harvard University, John M. Olin Center for Law, Economics, and Business, Cambridge, MA.
- Coates, J.C., 2000. Takeover defenses in the shadow of the pill: a critique of the scientific evidence. *Texas Law Review* 79, 271–382.
- Comment, R., Schwert, G.W., 1995. Poison or placebo? Evidence on the deterrence and wealth effects of modern anti-takeover measures. *Journal of Financial Economics* 39, 3–43.
- Daines, R., Klausner, M., 2001. Do IPO charters maximize firm value? Anti-takeover protection in IPOs. *Journal of Law, Economics, and Organization* 17, 83–120.
- DeAngelo, H., Rice, E.M., 1983. Anti-takeover charter amendments and stockholder wealth. *Journal of Financial Economics* 11, 329–360.
- Faleye, O., 2007. Classified boards, firm value, and managerial entrenchment. *Journal of Financial Economics* 83, 501–529.
- Field, L.C., Karpoff, J.M., 2002. Takeover defenses of IPO firms. *Journal of Finance* 57, 1857–1889.
- Gompers, P., Ishii, J., Metrick, A., 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118, 107–155.
- Gordon, M., 2002. Takeover defenses work. Is that such a bad thing? *Stanford Law Review* 55, 819–837.
- Greene, W.H., 2003. *Econometric analysis*. Prentice-Hall, Upper Saddle River, NJ.
- Harford, J., 2003. Takeover bids and target directors' incentives: retention, experience, and settling up. *Journal of Financial Economics* 69, 51–83.
- Hartzell, J., Ofek, E., Yermack, D., 2004. What's in it for me? Personal benefits obtained by CEOs whose firms are acquired. *Review of Financial Studies* 17, 37–61.
- Hasbrouck, J., 1985. The characteristics of takeover targets: q and other measures. *Journal of Banking and Finance* 9, 351–362.

- Heron, R.A., Lie, E., 2006. On the use of poison pills and defensive payouts by takeover targets. *Journal of Business* 79, 1783–1807.
- Institutional Shareholder Services, 2005. Governance at a crossroads. 2006 Proxy Season Preview/2005 review, October.
- Klock, M., Mansi, S., Maxwell, W., 2005. Does corporate governance matter to bondholders? *Journal of Financial and Quantitative Analysis* 40, 693–719.
- Linck, J., Netter, J., Yang, T., 2007. The determinants of board structure. *Journal of Financial Economics*, doi:10.1016/j.jfineco.2007.03.007.
- Malatesta, P.H., 1983. The wealth effect of merger activity and the objective functions of merging firms. *Journal of Financial Economics* 11, 155–181.
- Masulis, R.W., Wang, C., Xie, F., 2007. Corporate governance and acquirer returns. *Journal of Finance* 62, 1851–1889.
- Palepu, K.G., 1986. Predicting takeover targets: a methodological and empirical analysis. *Journal of Accounting and Economics* 8, 3–35.
- Pound, J., 1987. The effects of antitakeover amendments on takeover activity: some direct evidence. *Journal of Law and Economics* 30, 353–367.
- Schwert, G.W., 2000. Hostility of takeovers: in the eyes of the beholder. *Journal of Finance* 55, 2599–2640.
- Stein, J.C., 1988. Takeover threats and managerial myopia. *Journal of Political Economy* 96, 61–80.
- Stulz, R., 1988. Managerial control of voting rights: financing policies and the market for corporate control. *Journal of Financial Economics* 20, 25–54.
- Wall Street Journal, 2005. More Boards May End Staggered Terms. Bhattiprolu Murti, June 8.
- Wulf, J., 2004. Do CEOs in mergers trade power for premium? Evidence from mergers of equals. *Journal of Law, Economics, and Organization* 20, 60–101.
- Yermack, D., 2004. Remuneration, retention, and reputation incentives for outside directors. *Journal of Finance* 59, 2281–2308.