Board Classification and Managerial Entrenchment: Evidence from the Market for Corporate Control

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ABSTRACT

Board classification is a common corporate governance provision that staggers the annual election of directors. Critics of board classification contend that the governance arrangement moderates an incumbent manager's exposure to the market for corporate control, motivating empirical claims that board classification is causally associated with greater principal-agent conflict and a reduction in firm value. Alternatively, board classification, like anti-takeover devices generally, may be efficient if it allows incumbent managers to deter opportunistic bidding or negotiate for higher value bids. In this paper we examine the relation between board classification, takeover activity, and transaction outcomes for a panel of firms between 1990 and 2002. Target board classification is associated with an increasing likelihood of bid hostility and a commensurate increase in the incidence of multi-bid takeover contests. While board classification alters the dynamics of takeover bidding, the expected gains to target shareholders are equivalent in bids for targets with and without classified boards. Board classification is associated with a significantly lower likelihood of receiving a takeover bid. The economic magnitude of bid deterrence is not large enough to explain the observed difference in value between firms that do and do not utilize classified board structures. Overall, our analysis provides little support for an often cited link between board classification and managerial entrenchment.

1.0 Introduction

Board classification is a common corporate governance structure that staggers the annual shareholder election of director slates. In the absence of board classification all continuing and nominated directors of a corporation stand for election annually. In contrast, corporations utilizing classified board structures (also known as staggered boards) assemble directors into distinct classes (typically three) with successive annual elections occurring only for a single director class. Thus, under a classified structure, directors are elected to annual terms equal to the number of classes. Of the approximately 3,000 publicly traded firms covered by the Investor Responsibility Research Center (IRRC), a majority utilized a classified board structure at some point between 1990 and 2002.[1] Board classification is often adopted by firms going public in U.S. capital markets. Field and Karpoff (2002) find that 36.2% of firms going public between 1988 and 1992 employed a classified board at the issue date, while Daines and Klausner (2001) find that 43% of a sample of initial offerings between 1994 and 1997 included a classification provision in their corporate charter.

Despite its prominence as a corporate governance feature, recent evidence in Bebchuk and Cohen (2005) suggests that board classification is systematically associated with lower firm value. Corollary evidence presented in Faleye (2006) and Masulis, Wang, and Xie (2005) also indicates that firms employing classified boards exhibit a greater incidence of principal agent conflict. The extant literature has largely emphasized the anti-takeover properties of classified boards when motivating their adoption and maintenance.[2] This in turn has led many to conclude that classification suppresses a firm's exposure to the market for corporate control and is therefore a causal antecedent to agency conflict in firms that employ this governance structure.

In this paper we address this inference through an examination of board classification and

[1] The IRRC governance database has 10,121 total firm and year observations between 1990 and 2002 of which 5,911 observations are recorded as having a classified board structure.

[2] A conventional view is espoused in Daines and Klausner (2001) who state that classified boards have "…no justification except to ward off challenges for control."

characteristics of the market for corporate control. Specifically we evaluate the empirical relation between classification and the likelihood of takeover bidding, bid outcomes, and concomitant shareholder wealth effects. Board classification can be an effective obstruction to takeover bidding as hostile acquirers, failing to secure a negotiated takeover agreement with target management, would be unable to acquire control of a target board of directors without waiting, at minimum, one-year between independent referendums on class-based director slates.[3] Board classification is also a linchpin to the maintenance of alternative anti-takeover provisions written into the corporate charter (such as poison pills), the modification of which requires board approval. While board classification endows incumbent management with a substantial degree of discretion in responding to change-in-control events it remains unclear whether this mechanism is used to benefit or harm shareholders. Board classification, like other anti-takeover measures, can be used to deter opportunistic bidding or improve managerial bargaining power on behalf of target shareholders in negotiated transactions. Alternatively, self-interested managers may use classification to dissuade or obstruct bidding by higher value acquirers. Given the prevalence of board classification, recent evidence linking this governance feature to a systematic value loss has sparked a vigorous academic and policy debate concerning its properties as an anti-takeover device.[4]

In the first part of this analysis, we estimate the impact of board classification on the bid dynamics and payoffs to target shareholders receiving change-in-control bids. Analyses of intermediate bid outcomes indicate that target board classification is associated with an approximately 4.0% higher incidence of initial bid resistance, but an insignificantly different rate of bid or auction completion when compared to targets with a single class of directors. To examine the

[3] The proxy process and interval required to replace incumbent directors across classes depends upon the ability of shareholders to call special meetings and replace directors without cause. See Bebchuk, Coates, and Subramanian (2002) for a summary of the time conditions imposed by these constraints.

[4] Anecdotal explanations for the economic efficiency of classification also exist. Extended director terms 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 requiring long-horizon or sequential investment decisions.

trade-off between bid resistance and deal completion, we follow Betton and Eckbo (2000) and estimate forward-looking bid outcome probabilities in a multinomial logit model as a function of initial bid response, bid features, and characteristics of the target firm. Initial bid hostility decreases the likelihood of initial bid success for both classified and non-classified board targets, but is not a significant determinant of multi-bid outcomes, either completed or unsuccessful, in either subsample. Target firms with classified boards are, however, more likely to be involved in multi-bid takeover sequences.

We next examine cumulative abnormal returns around the announcements of initial takeover bids as well as returns through an entire bidding sequence. Average target shareholder wealth effects are statistically equivalent between firms with and without classified boards across each of the modeled bid outcomes. Additional analyses in a multivariate setting, controlling for bid and target firm characteristics, yield similar results. In light of these findings, we conclude that while classified boards alter the dynamics of takeover contests, the average gains to target shareholders in observed takeover bids do not vary with board classification.

The second part of our analysis is dedicated to evaluating the extent of any deterrent effect attributable to a classified board structure. We posit that board classification, as with other anti-takeover measures, raises the expected cost of bidding and causes marginal prospective acquirers to refrain from submitting bids. Controlling for the endogenous decision to maintain a classified board, classification is associated with a 2.1% reduction in the likelihood of receiving a takeover bid. The economic significance of this effect is substantial in comparison to the 3.6% observed bid frequency rate for the subsample of targets with classified boards, leading us to infer that deterrence is the primary channel through which classified boards alter a firm's exposure to the market for corporate control. Based on our estimates, we parameterize the hypothetical gain to eliminating deterrence for prospective target shareholders. The results of this analysis suggests that bid deterrence can explain

less than 25% of the average difference in value (as measured by market-to-book) between firms with and without classified boards.

Contributions of this work accrue on several dimensions. First, our study provides systematic evidence on the relation between board classification and the returns to target shareholders engaged in corporate control transactions. Conditioned on observing a bid, the average returns to target shareholders do not vary significantly with the firm's use of a classified board structure. Given this evidence, we question the empirical basis underlying recent calls for an enhanced standard of regulatory or judicial scrutiny over transactions involving targets with classified boards. Second, our analysis isolates a significant bid deterrence effect associated with classified board provisions; however we urge a degree of caution in interpreting this result. Our evidence does not suggest that bid deterrence effects adequately explain differences in firm value identified in this and prior work, leading us to temper the common conclusion that differences in value are a byproduct of managerial entrenchment. Furthermore, given our evidence concerning observed bid outcomes, we can not establish that takeover bids that might obtain in the absence of board classification would otherwise be efficient for target shareholders. Finally, given the relative dearth of research concerning the potential shareholder benefits associated with classified boards, our evidence suggests a more circumspect policy approach is warranted relative to the pervasive calls for the wholesale abolition of this common governance provision.

The remainder of this paper is structured as follows. In Section 2, we briefly summarize the existing theoretical literature concerning board classification and the efficiency and incidence of corporate control bids. Section 3 summarizes the empirical literature concerning board classification, change-in-control transactions, and firm value, and reviews the policy implications derived from the conventional wisdom. In Section 4 we document our procedures for sampling firm-year observations on governance characteristics and takeover activity. Section 5 estimates outcome probabilities and the wealth gains to target shareholders from takeover attempts conditioned on a firm's use of a

classified board. Section 6 examines the likelihood of receiving a takeover bid as a function of board classification, and parameterizes the value loss attributable to bid deterrence. We summarize the analyses and provide concluding remarks in Section 7.

2.0 Theory: Board classification and the market for corporate control

The role of board classification in moderating activity in the market for corporate control can obtain on two dimensions. Conditioned on observing a takeover bid, classification may be employed by management to modify the negotiated outcomes realized by target shareholders. Classification may also alter the rate at which bids are observed. In this section we summarize the theoretical relation between board classification and 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.[5] From this perspective, board classification is used as a device to preserve management's private benefits of control, either preemptively through the deterrence of bids by higher value acquirers, or through a higher incidence of bid hostility and a lower incidence of unsolicited 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 self-dealing managers often negotiate with acquirers for side payments at the expense of their constituent shareholders. If board classification endows management with substantial leverage in negotiating for private benefits in change-in-control agreements, managerial discretion predicts that board classification will be associated with a lower incidence of explicit bid

[5] Our 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 summary of the potential for managerial entrenchment afforded by board classification.

negotiation and lower gains to target shareholders in negotiated (friendly) transactions.

2.2. Shareholder interest

A second hypothesis, which we henceforth refer to as the shareholder interest hypothesis, suggests that board classification improves target management's ability deter opportunistic bids as well as enhance outcomes obtained during merger and acquisition negotiations on behalf of target shareholders. DeAngelo and Rice (1983) and Stein (1988) suggest that anti-takeover provisions deter opportunistic bidding in instances where the value of a firm's projects can not be accurately conveyed to outside investors. Evidence in Harford (2003) and Yermack (2004) also indicates that external incentives may be sufficient to encourage directors (particularly unaffiliated directors) to represent target shareholder interests and deter managerial self-dealing in the context of a change-in-control bid. The efficacy of anti-takeover provisions in change-in-control negotiations is well established. Comment and Schwert (1995) find that another anti-takeover provision, the poison pill, while not deterring transactions, improves the bargaining outcomes realized by target shareholders.[6] Therefore, conditioned on observing a bid, the shareholder interest hypothesis suggests that board classification will improve the bargaining leverage of target management and yield greater expected gains to target shareholders. Enhanced bargaining leverage raises the expected costs of bidding for prospective acquirers leading some to refrain from submitting bids. Therefore the shareholder interest hypothesis also suggests that board classification will be associated with a lower incidence of takeover bidding.

3.0 Literature and policy review

In this section we summarize the existing empirical literature relating board classification to firm

[6] In a related paper Brickley, Coles and Terry (1994) find that the stock market reaction to the adoption of a poison pill amendment is positively correlated with the fraction of outside directors on the board. They infer that outside directors are more likely to utilize this provision in a way that enhances the value of target shares.

value and the market for corporate control. We then review policy recommendations concerning the adoption and maintenance of board classification generally, and in the context of corporate control transactions.

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

The findings of Gompers, Ishii, and Metrick (2003) and Cremers and Nair (2005) highlight a consistent empirical relation between the internal and external governance arrangements of a firm and the market value of its claims. In follow-on work, researchers have examined, more specifically, the cross-sectional relationship between board classification and firm value. Bebchuk and Cohen (2005) for example, find that that board classification is negatively correlated with Tobin's Q. Similar work by Bebchuk, Cohen and Ferrell (2005) indicates that a six factor "entrenchment" index, which includes board classification, exhibits the most significant negative correlation with Tobin's Q and long-run equity returns.[7] In interpreting their findings, both Bebchuk and Cohen (2005) and Bebchuk, Cohen and Ferrell (2005) infer that board classification insulates incumbent managers from the market for corporate control and by extension exacerbates principal-agent conflicts.[8]

Despite an established correlation between firm value and board classification, it remains unclear whether this relation is causal. DeAngelo and Rice (1983) and Jarrell and Poulsen (1987) report that the average announcement period abnormal return to firms adopting classified board charter amendments are insignificantly different from zero. Linn and McConnell (1983), however, find that shareholders react positively to the adoption of various anti-takeover amendments including board classification. More generally, Core, Guay, and Rusticus (2006) show that analysts correctly anticipate poor operating performance for weak governance firms, and that investors' reactions to

[7] In addition to board classification, the six factor entrenchment index of Bebchuk, Cohen and Ferrell (2005) includes limits to shareholder bylaw amendments, supermajority requirements for shareholder votes pertaining to merger approval and charter amendments, poison pill charter amendments, and golden parachute provisions.

[8] In a similar vein Klock, Mansi, and Maxwell (2005) find that the cost of debt capital is decreasing in the presence of various corporate anti-takeover provisions, including board classification. These authors conclude that anti-takeover provisions insulate management from the market for corporate control, coincidentally reducing debtholder's exposure to change-in-control transactions.

earnings announcements do not vary with indices formed on proxies for shareholder rights. Given this evidence Core, Guay, and Rusticus reject the hypothesis that governance features explain unexpected cash flows and abnormal returns.

Corollary research examines the empirical relation between board classification and various proxies for principal-agent conflict. Masulis, Wang, and Xie (2005) find that announcement returns to bidding firms in acquisition attempts are 0.57% to 0.91% lower for bidders with a classified board. These authors attribute this finding to self-serving behavior of acquiring firm managers insulated from the discipline imparted by the market for corporate control. Consistent with entrenchment, Faleye (2006) also finds that board 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.[9] In a related analysis, Borokhovich, Brunarski, and Parrino (1997) find that the CEOs of firms adopting supermajority and fair price amendments receive higher salaries and more valuable option grants relative to non-adopters. They similarly conclude that anti-takeover amendments deter takeover activity and aggravate principal-agent conflict.

Despite broad-based support for the notion that board classification facilitates managerial entrenchment by reducing the likelihood of disciplinary takeovers, the empirical evidence for bid deterrence is mixed. Pound (1987) identifies a lower incidence of takeover bidding between 1974 and 1984 for firms adopting both supermajority and classified board amendments. Alternatively, Ambrose and Megginson (1992) find that the likelihood of takeover bidding between 1981 and 1986 is insignificantly correlated with board classification.

Evidence concerning 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

[9] Faleye's analysis censors turnover observations attributable to mergers and acquisitions and therefore does not relate the efficacy of the implied mechanism of managerial discipline – the market for corporate control.

with anti-takeover amendments resist bids compared to 38% for the control sample, and that resisting firms with anti-takeover amendments successfully block bids in every instance. Announcement period returns to target shareholders, however, are insignificantly different between the subsamples leading Pound to conclude that board classification and supermajority conditions fail to improve target shareholder welfare in takeover contests. Bebchuk, Coates, and Subramanian (2002) examine 92 hostile bids between 1996 and 2000. Of the 45 target firms with classified boards, 60% (27) remain independent in the 9-months following a bid announcement, while 32% (16) of the 47 target firms without a classified board remain independent over the same period. Bebchuk et al. do not find, however, that premiums associated with hostile bids to firms with and without a classified board are significantly different. These authors conclude that, conditioned on bid hostility, classification (in conjunction with a poison pill) increases the likelihood of target firm independence while failing to yield significantly higher premiums for target shareholders.[10]

3.2. Board classification: A policy perspective

Given its potential as an entrenchment device, board classification has come under increasing investor scrutiny. As a vigorous opponent, Institutional Shareholder Services (ISS) provides a blanket recommendation for its membership to vote against proposals to either classify a board or alter board structure in the context of a change-in-control bid, and to vote for proposals to repeal classified board provisions.[11] ISS also recommends that shareholders avoid voting for board members who have previously ignored precatory shareholder votes to declassify boards, and ISS

[10] As noted in Gordon (2002) the conditioned sample used in Bebchuk et al. omits bid outcomes for a far larger subset of friendly bids for classified board targets, deals in which managers may have successfully leveraged anti-takeover mechanisms to negotiate higher-value deals for target shareholders. Given this omission, it is not possible to accurately draw inferences regarding the ex ante shareholder welfare implications of board classification in the context of observed change-in-control contests.

[11] See the *ISS 2006 US Proxy Voting Guidelines*.

lowers its corporate governance coefficient for all firms that maintain a classified board.[12] The basis for the ISS position is effectively summarized by Patrick McGurn, senior vice president of ISS, who states that studies and empirical evidence show "…pretty conclusively that unlike poison pills, there is no evidence that boards use classified structure to enhance shareholder value. In fact the opposite appears to be true."[13] ISS is not alone in its critique of the classified board structure. The largest public pension fund in the U.S., Calpers, has repeatedly targeted firms with classified boards through shareholder votes against such provisions. Recent targets of Calpers attention in this regard include Sears, Roebuck and Company and the Maytag Corporation.

Reform minded critics have also sought legal relief from the perceived anti-takeover properties of board classification. Bebchuk, Coates, and Subramanian (2002) suggest that the successful election of a single slate of directors proposed by a hostile bidder be interpreted as a successful shareholder referendum regarding a takeover bid. In this context, Bebchuk et al. argue for changing the legal rules to mandate the redemption of a poison pill following the successful election of a single slate of dissident directors and to allow the bidder to proceed with its bid.[14] While this revision would uniformly eliminate the potential for managerial discretion, it ignores the obvious concern that the potential for the revocation of an anti-takeover feature in the context of a negotiation would have the commensurate but unintended consequence of reducing bid quality (e.g. Gordon, 2002).

In the wake of increasing institutional and academic scrutiny, proposals to eliminate classified board provisions from corporate charters are at an all time high. ISS reported that as of October 2005 more than 65 firms had a repeal proposed in the annual proxy, while the proportion of

[12] For example, in the March 21-25, 2005 "This Week in Governance Transcript" ISS reiterated a withhold recommendation for three nominees of Sempra Enegy "…due to their repeated refusals to repeal the company's staggered board terms in the wake of a string of majority votes on declassification shareholder proposals".
[13] See "More Boards May End Staggered Terms" by Bhattiprolu Murti *The Wall Street Journal* June 8, 2005.
[14] Bebchuk, Coates, and Subramanian (2002) suggest that board classification and a poison pill provides a more effective takeover defense than a classified board alone as a hostile large block shareholder makes the replacement of target directors inevitable. Thus a first successful hostile proxy fight for a single director class will presumably

firms covered by ISS with classified boards declined from 55.10% in 2003 to 52.60% in 2005.[15] Consistent with increasing external pressure, directors and management actually sponsored the majority of board-declassification proposals through the first half of 2005.[16]

4.0 Data and summary statistics

Our sample includes U.S. public corporations covered in at least one of the volumes published by the Investor Responsibility Research Center (IRRC) between 1990 and 2002. IRRC volumes include information on a set of 24 governance provisions for firms in the S&P 1500 and other major U.S. corporations, and are published for the years 1990, 1993, 1995, 1998, 2000 and 2002. This sample includes 3,121 unique firms and 10,121 firm-year observations. We match firm-year observations from IRRC to Compustat identifiers and retain all observations with non-missing book value of assets. Following Gompers, Ishii, and Metrick (2003) we assume that a firms' particular governance provision (excluding board classification) is in place during the years immediately following the publication of an IRRC volume up to the date of the next publication. After applying the requirement of non-missing assets data for all intervening years our panel consists of 20,111 firm year observations for 3,087 unique firms between 1990 and 2002.

Data on board classification, including the year of adoption and whether or not classification is incorporated in a firm's bylaws or charter is obtained from the IRRC volumes when available. In the absence of IRRC information we rely on SEC filings from Edgar or on fiche from the Q files from 1981 forward to identify the adoption date of board classification. In the event that we can not identify the adoption date we assume that the firm classified its board at the date of the IPO, which we measure as the first trading date on CRSP.

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result in the resignation of the remaining director classes in the presence of a hostile blockholder.

[15] See "Governance at a Crossroads: 2006 Proxy Season Preview/2005 Review" presented to the ISS Annual Conference, October 2005.

[16] See "More Boards May End Staggered Terms" by Bhattiprolu Murti, *The Wall Street Journal*, June 8, 2005.

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 two years following (2004) the panel interval. Targets in SDC transaction reports are matched to CRSP/Compustat GVKEY identifiers using reported SDC target CUSIPs. Given variation across SDC and Compustat CUSIP codes we confirm positive matches by comparing the SDC reported company name against the historical name structure on CRSP. For a subset of SDC transactions not matched on CUSIP we match transactions to the CRSP/Compustat merged database using the target corporation's name from SDC and the current and historical name structure on CRSP.

Our sample of 3,087 IRRC firms is associated with 5,298 M&A 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 we further eliminate 39 observations classified as "acquisitions" in which acquirers are the target firm's own shareholders. This conditioning yields a sample of 1,390 bids announced between 1988 and 2004 involving firms covered in the IRRC panel between 1990 and 2002. 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 bid announcement. Bids are part of an auction if announced within 365 calendar days of the last observed bid announcement for a target. Initial bids in each auction sequence are matched to the merged IRRC/Compustat data by calendar year. The final dataset consists of 746 initial bids and 103 follow-on bids (849 bids) between 1990 and 2002. The excluded bids are all announced either before a firm enters our panel or after 2002, the final year in our panel. To ensure that we observe a

complete auction sequence we retain bids announced outside of the dates that a firm is in our panel provided that the bid is part of an auction that begins while the firm is in the panel.

Table 1 summarizes the incidence of various governance characteristics for the panel of firm year observations that make up our sample.[17] Governance characteristics include the six entrenchment provisions defined by Bebchuk, Cohen, and Ferrell (2005). Governance provisions change infrequently for firms over time, leading to a low degree of time series variation. The majority of firms, from 56.5% to 60%, utilize a classified board. Among the other provisions, poison pills and golden parachutes are also used by a majority of firms, while supermajority provisions and limits to bylaw and charter amendments are less pervasive. Blank check preferred stock and business combination laws are the most prevalently employed alternative governance features. The G-index of Gompers, Ishii, and Metrick (2003) averages about 9 for our sample and between 50% and 60% of the firms are incorporated in Delaware in any given year.

Table 2 presents a summary of the frequency of takeover bidding and deal characteristics for the sample takeover bids. Firms with a single class of directors receive 324 initial takeover bids during the sample period or 3.86% of the firm-year observations, while 3.60% of the firm-year observations (422) entail an initial acquisition bid for a firm with a classified board. Follow on bids in an auction sequence are slightly more prevalent in firms with classified boards. Specifically, 10.74% of bids (39) involving targets with a single director class are follow-on bids in an auction, while 13.17% of bids (64bids) within the classified board subsample are follow-on bids.

Summary statistics for deal characteristics for the 746 initial takeover bids reported in Table 2 are obtained from SDC. Statistical differences in means (medians) between deals involving firms with and without classified boards are defined by asterisks in the right most column. Differences in mean (median) deal value and the size of bidder toeholds between transactions involving classified

[17] We refer readers to the descriptive appendix provided in Gompers, Ishii, and Metrick (2003) for further detail regarding the governance features covered by IRRC.

and non-classified board targets are not significantly different from zero. Bid premium is computed as the final bid price per share (SDC) relative to the share price 42 trading days prior to the initial bid, less one. Given missing data, premiums are computed for 667 of the 746 initial bids in our sample. The average bid premium is 39.09% for firms with a classified board, compared to 35.93% for firms with a single class of directors. The difference in bid premiums is not statistically significant, however. Bid hostility is observed at twice the rate for classified board targets (10.43%) as non-classified board targets (4.94%). Consistent with the higher rate of bid hostility, classified board bids are less likely to involve termination fees or bidder equity, which tend to be more prevalent in negotiated transactions, but are more likely to involve tender offers. Also consistent with the higher rate of bid resistance, bids for classified board targets are associated with a slightly lower rate of completion (71.09%) compared to the completion rate of 76.24% for non-classified targets. With the exception of bid hostility, none of the other differences in bid characteristics are statistically significant.

5.0 Board classification, bid response, and expected payoffs to target shareholders

In this section we estimate the determinants of bid response, bid outcomes, and the expected payoffs to target shareholders. To illustrate the dynamics between classification, bid hostility, and deal completion we evaluate the determinants of bid response and completion independently. We supplement this analysis with multinomial estimates of the likelihood of alternative bid outcomes and the corresponding returns to target shareholders.

5.1. Bid hostility

Table 3 summarizes the results of logit regressions estimating the likelihood of bid hostility. Negotiation will likely reduce the incidence of hostility in follow-on bids, therefore we limit our analysis to initial bids in an auction sequence. Following Schwert (2000), we model hostility as a function of various target firm control variables and add indicator variables for the independent and

joint use of board classification and poison pills by takeover targets. Deal characteristics are not included in this specification as such terms are likely determined endogenously with bid response. Marginal effects, reported in brackets, are computed at the mean values of the independent variables and relate the change in the probability of a hostile initial bid response for a one unit increase in a continuous variable, or a shift from zero to one for an indicator variable. For interacted variables we report the mean marginal effect computed as in Ai and Norton (2003).

Model 1 of Table 3 estimates the likelihood of a hostile initial bid reception as a function of our governance variables. Targets with a classified board are approximately 4.4% more likely to respond negatively to bids. As in Comment and Schwert (1995), our results also indicate that poison pill provisions increase the likelihood of bid hostility by 5.1%, a result they attribute to managerial bargaining rather than entrenchment. We consider a similar conclusion as it pertains to board classification in Sections 5.2 and 5.3 of this paper.

Model 2 of Table 3 includes controls for target pre-bid characteristics (size, leverage, market-to-book) and bid premium as determinants of initial bid hostility. The market-to-book ratio, measured as total assets minus book value equity plus market value equity divided by total assets for the target firm in the fiscal year prior to the bid is used as a proxy for Tobin's Q. Target leverage is measured as the ratio of short- and long-term debt to total assets, and size is proxied using the natural log of the book value of total assets for the target firm. All of the firm characteristics are measured in the fiscal year prior to the bid. Target firm characteristics and the bid premium are insignificantly correlated with hostility with the exception of market-to-book, which exhibits a negative correlation. Model 3 incorporates an interaction term relating the incremental likelihood of bid hostility for firms employing both a classified board and a poison pill. The coefficient on this term is not significantly different from zero, and the mean marginal effect of the interaction term is economically small (-0.90%), indicating that combined use of these provisions, characterized by Bebchuck, Coates, and Subramanian (2002) as a powerful anti-takeover combination, is not associated with a greater

propensity for hostility relative to the effect attributable solely to classified boards.

While board classification may deter unwanted bidding, it is possible that acquirers are uncertain of a prospective target's predilection for independence. To the extent that post-bid reactions are not perfectly transparent to bidders, we examine target reactions specifically for the subset of low Q target firms. Under the managerial discretion hypothesis, poorly performing firms (as proxied by a low value of Tobin's Q) maintain their independence through bid deterrence and resistance facilitated by board classification. To consider this proposition Model 4 of Table 3 incorporates a "low Q" indicator variable equal to one for targets with a pre-bid Tobin's Q in the lowest half of the firm-year observations in the full sample (Q<1.33). The coefficient on low Q is insignificantly correlated with bid hostility, as is the term interacting low Q and classified board. Given these results we can not conclude that the relation between board classification and hostility differs between low and high Q target firms with classified boards.

5.2. Bid and auction completion

The positive relation between board classification and initial bid hostility suggests that target management may have a predilection for remaining independent. Alternatively, the increasing incidence of hostility may reflect management's willingness to negotiate for higher bid values. To evaluate the impact of management's initial disposition on bid outcomes, Table 4 models the likelihood of bid and auction completion as a function of the target firm's board classification, bid reception, and target firm and bid characteristics. Of the 746 initial bids in our sample 73% are completed while 77% of the auctions (including single bid auctions) in our sample are ultimately completed.

Model 1 of Table 4 examines the likelihood that an initial bid is completed as a function of the target firm's governance characteristics and bid hostility. The coefficient on the classified board indicator is insignificantly different from zero, suggesting that the likelihood of completion for an initial bid is equivalent across the classified and non-classified board subsamples. In unreported

specifications, bid completion is also no less likely in cases where the target utilizes both a classified board and poison pill. Model 1 also includes an indicator variable equal to one if the initial bid reception is hostile as reported by SDC as well as an interaction term that isolates the joint effect of board classification and hostility on completion. The negative and significant coefficient on hostility suggests that bids receiving a hostile initial reception are 42.6% less likely to be completed relative to unsolicited or friendly bids. The interaction term of hostility and board classification, however, is insignificantly different from zero, although the mean marginal effect associated with the interaction term is economically large (-12.4%). Thus while initial bid hostility is more commonly observed for targets represented by classified boards, the relation between a hostile response and the completion of the initial bid is insignificantly different for this subset of target firms.

Model 2 of Table 4 incorporates control variables for target size, leverage, and Q. None of the coefficients on these controls are significantly different from zero and their addition does not appreciably alter the inferences derived from Model 1. Model 3 controls for deal characteristics, including the bidder toehold and indicator variables equal to one for deals involving a target payable termination fee, tender offers, and equity compensation. As 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. Consistent with Walkling (1985) and Betton and Eckbo (2000) the likelihood of bid completion is increasing in a bidder's toehold, although the coefficient is not statistically significant. Most importantly, our conclusions relating board classification, poison pills, and bid hostility to bid completion remain unchanged in this specification.

Completion rates for initial bids understate the likelihood of completion in instances where bid hostility or withdrawal are associated with follow-on bidding for a target, therefore Model 4 of Table 4 examines the likelihood that the target is ultimately acquired in an auction. In this specification we control for target firm characteristics measured in the fiscal year preceding the initial bid, but exclude bid characteristics. The determinants of auction completion resemble those

associated with the completion of initial bids. The likelihood of auction completion is insignificantly associated with the classified board or poison pill provisions of targets, but is 40.8% lower in cases where an initial bid receives a hostile response. The coefficient on the interaction between board classification and initial bid response is also insignificantly different from zero, leading us to conclude that completion rates for auctions characterized by initial bid hostility are equivalent for classified and non-classified board targets. Note, however, that both the coefficient on the interaction term and the sign of the marginal effect become positive in the auction completion regression, providing some evidence that bid hostility in firms with classified boards ultimately lead to deal completion rates that are equivalent to those in firms without a classified board structure.

5.3. Board classification and the expected value of takeover bidding to target shareholders

We extend our analysis of the dynamics of single and multiple bid contests using multinomial logit regressions to model bid outcomes for the takeover bids in our sample. Similar to the methodology adopted in Betton and Eckbo (2000), we model an outcome tree for takeover contests that identifies completed and unsuccessful takeover bids and discriminates between single and multi-bid contests. We estimate regressions separately for the classified and non-classified board subsamples and summarize the results in Table 5. Coefficients reflect a Theil normalization described in Kmenta (1986) and relate the likelihood of realizing the respective state outcome relative to the omitted outcome of a single unsuccessful bid. Marginal effects computed at the mean value of the independent variables are provided in brackets.

Hostility has a negative effect on the likelihood of success of a single bid contest for both targets with and without a classified board structure. The marginal effect of hostility on the relative likelihood of success for single bids is larger for firms with classified boards (-63.0%) compared to firms without a classified board (-49.4%). Initial bid hostility does not, however, significantly affect the relative likelihood of realizing multiple bid outcomes, either completed or unsuccessful, relative to an unsuccessful single bid outcome. In firms with a classified board both tender offers and

termination fees increase in the likelihood of completing either single or multi-bid transactions relative to realizing a single bid unsuccessful takeover attempt, while stock offers decrease the relative likelihood of a successful single bid outcome. For bids involving targets with a single class of directors, tender offers, stock offers and termination fees increase the relative likelihood of a successful single bid auction while tender offers marginally decrease the relative likelihood of observing a multiple bid unsuccessful contest.

The final column of Table 5 provides predicted outcome probabilities evaluated at the mean values of the model's explanatory variables. For targets with classified boards the predicted probability of completing an initial bid is 69.4% compared to 74.3% for initial bids to targets with a single class of directors. Although classified board targets complete initial bids at a lower rate, the predicted probability of a completed multi-bid auction for this subset of targets is 9.9% compared to 8.0% for targets employing a single class of directors. Finally, for firms with classified boards the predicted probability that a multi-bid auction fails is 3.1% and the likelihood that a single bid contest fails (the omitted probability) is 17.6%. The corresponding failure probabilities for firms without classified boards are 2.1% and 15.6%, respectively. Overall the analysis suggests that consistent with the shareholder interest hypothesis, classified boards are associated with a greater incidence of multi-bid contests and trade-off a higher rate of hostility and initial bid failure for an increasing incidence of bid revisions and follow-on bidding.

To evaluate the trade-off between bid negotiation and the likelihood of deal failure Panels A and B of Table 6 summarize the average wealth effects for target shareholders associated with the deal outcomes in the contest tree for targets with and without classified boards. Announcement CARs are computed as the sample firm's return minus the return on the CRSP value-weighted NYSE/AMEX/Nasdaq index summed over the three-day period {-1, +1} relative to the bid announcement. Announcement period returns are estimated for initial bids and are computed only for deals with non-missing daily returns data over the event window yielding a sample of 740 initial

bid CAR observations. As an alternative to announcement CARs, we also report average auction CARs to target shareholders measured as net-of-market returns cumulated over the auction interval beginning 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. Panel B also includes *p*-values in parentheses that reflect the statistical significance of differences in CARs between the classified and non-classified target firm subsamples.

The average announcement CAR {-1, +1}, reported in the last column of the table, is 17.9% for target shareholders represented by classified boards and 17.6% for targets with a single class of directors. The difference between the samples is not statistically different from zero. The average auction CAR for firms with classified boards is 26.2%, somewhat greater than the 25.2% average CAR associated with non-classified board firms, however, the difference in auction CARs between the subsamples is also not significantly different from zero. Across the various auction outcomes, CARs tend to be higher in successful deals and in deals with multiple bids for the same target, however, differences between the classified and non-classified board target subsamples are insignificantly different from zero for each outcome.

To provide additional evidence on target shareholder wealth effects, Table 7 reports OLS regressions of announcement and auction CARs on an indicator for classified boards and controls for deal and target firm characteristics. Deal characteristics include indicator variables for bid hostility, bid form, equity bids, as well as the size of the bidder's toehold. Target variables include size, leverage, and market-to-book and are computed in the fiscal year prior to the bid. In the regressions using auction CARs as the dependent variable we condition on the bid and target firm characteristics coinciding with the first bid in the auction. Finally the specifications using announcement returns include an indicator variable equal to one if the initial bid is completed which serves as a proxy for investors' ex ante expectation of success, and the specifications using auction returns control for the final outcome of the auction. All specifications include year dummies to control for any un-modeled

macroeconomic effects.

Models 1 and 2 of Table 7 summarize regressions of target announcement period CARs, while Models 3 and 4 summarize the determinants of CARs computed over the auction interval. In both Models 1 and 3 the indicator variable associated with target board classification is not significantly different from zero, suggesting that bid announcement and auction returns are insignificantly correlated with the presence of a target classified board provision. However, announcement period CARs are 5.8% (p-value=0.021) higher, and auction CARs are 12.7% (p-value=0.007) higher in hostile as compared to friendly bids.

Given our prior evidence that targets with classified boards are more likely to mount a hostile response to takeover bids, Models 2 and 4 examine whether the effect of bid hostility differs with the existence of board classification. The coefficient on the interaction between bid hostility and the existence of a classified board is not statistically significant in either model, indicating that board classification does not significantly modify the effect of bid hostility on the wealth effects to target shareholders. Overall, consistent with our univariate results, the multivariate analysis of deal CARs provides no evidence that target shareholder wealth gains to takeover activity vary significantly with the target's use of a classified board provision.

6.0 Board classification and the likelihood of change-in-control bidding

The analysis in Section 5 suggests that classified boards are associated with a higher rate of initial bid hostility and initial bid failure, but also exhibit a greater incidence of multi-bid completed outcomes. Overall, expected wealth effects for target shareholders do not vary with target board classification, a result that does not comport with managerial discretion. These results are derived from observed takeover bidding and therefore provide only an incomplete perspective on the potential relation between board classification and the market for corporate control. In this section we extend our analysis of the relation between board classification and the market for corporate

control by evaluating the potential bid deterrence effects associated with this governance structure.

6.1. The likelihood of receiving a takeover bid

In Table 8 we summarize the results of probit regressions estimating the likelihood of a takeover bid as a function of a firm's governance provisions and various other characteristics including size, leverage, and the market-to-book ratio. The regressions also include pre-bid abnormal performance measured as the rolling mean monthly abnormal return on the firm's stock computed over the twelve months prior to the calendar year of the firm-year observation in the panel. The regressions control for industry and year fixed effects (1990 is the excluded year). Missing firm level data imparts sample restrictions across the specifications.[18]

Models 1 and 2 of Table 8 summarize individual probit models with dependent variables equal to one for firm-year observations involving an initial takeover bid and zero otherwise.[19] Robust clustered standard errors adjusted for non-independence of observations by firm are used to assess statistical significance. 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, but not significantly different from zero (p-value=0.164) indicating that board classification does not significantly alter a firm's likelihood of receiving a takeover bid. Coefficients on the control variables indicate that larger firms and those with higher stock returns and Q are less likely to receive takeover bids, while leverage increases a firm's chance of becoming a bid target.

In Model (2) of Table 8 we incorporate additional components of the Bebchuk, Cohen, and Ferrel (2005) entrenchment index. In this specification, the negative coefficient on board classification is statistically significant (p-value=0.026), although the marginal effect indicates that classified boards are only approximately 0.6% less likely to receive a takeover bid in a particular

[18] Several prior papers have estimated 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).

year. Of the other governance factors, poison pills have an insignificant impact on the likelihood of takeover bidding. This result differs from that in Comment and Schwert (1995), who find that poison pills are associated with an increase in the likelihood of a takeover. We infer that this difference is likely a function of the relative proliferation of poison pill provisions in our latter subperiod. Of the four remaining governance characteristics, the presence of a golden parachute has the most significant impact on takeover likelihood, increasing it by 1.8%, while limits to charter amendment, although rare, increase the likelihood of takeover by 1.2% all else equal. Golden parachutes are often thought to decrease the incidence of takeover by increasing transaction costs for acquirers; however, the positive coefficient on this variable suggests that adoption of golden parachutes may in fact occur in anticipation of takeover bidding. Limits to bylaw amendments and supermajority provisions are not significantly correlated with the likelihood of receiving a takeover bid.

We are cognizant of the potential for an endogenous relation between bid likelihood 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 structure 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 often adopted by firms at the date they go public. In our sample we find that for the 422 bid observations 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 12.47 years, with only four firms adopting a classified board structure within one year of a bid announcement. We therefore infer that board classification is not a mechanism adopted by managers anticipating a takeover bid.

A second concern involves the possibility that firms adopting and maintaining classified board structures through the sample period might otherwise be systematically more likely to be the

[19] We use probit regressions when modeling bid likelihoods in Table 8 (compared to logistic regressions elsewhere in the paper) so that we can directly compare results to the bivariate probit analysis in model 3 of Table 8.

targets of takeover attempts. Despite our extensive use of firm control variables, if firms with a greater ex ante exposure to change-in-control bids are also more likely to adopt a classified board structure, our estimates concerning takeover likelihood will suffer from a self-selection bias understating the true deterrent effect of board classification. To address self-selection we follow the methodology outlined in Greene (2003) and simultaneously 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 transactions costs associated with nominating and electing a large slate of directors, while board size per se should not obviously change the costs associated with a takeover attempt. Data on board size is obtained from IRRC for the years 1998 through 2002 and is supplemented with board data obtained from Compact Disclosure for the years 1990 through 1997. Data for board size is missing for 1,125 firm-year observations.

Model 3 of Table 8 summarizes the simultaneous estimation of the likelihood of board classification and a takeover bid. Consistent with our hypothesis, the likelihood of classification is increasing in board size. Tobin's Q is also a significant predictor of the decision to maintain a classified board. We report an estimate of the error correlation (rho) between the two equations. The p-value of a Wald test of whether the correlation in the error terms is different from zero is 0.126, providing weak evidence that accounting for self-selection is appropriate in this context.

Controlling for the determinants of board classification, the coefficient estimate on the use of a classified board in the takeover likelihood regression is negative and significant at the 10% level (p-value=0.094). The marginal effect of a classified board on bid likelihood is -2.1%, indicating that, after controlling for self selection, board classification is associated with a significant deterrence effect. The relative magnitude of the estimated effect is substantial in light of an observed takeover frequency of 3.6% for the subsample of targets with classified boards, leading us to infer that

deterrence is a primary channel through which classified boards alter a firm's exposure to the market for corporate control.

6.2. Board classification, bid deterrence, and firm value

To gauge the economic significance of bid deterrence we estimate the expected change in takeover activity associated with the elimination of a classified board structure and evaluate the implied commensurate change in market value for prospective target firms in our sample. Average Q in our data is 1.94 for the non-classified board subsample and 1.75 for the subsample of firms incorporating a classified board. Bebchuk and Cohen (2005) do not report univariate statistics; however, in reported panel regressions they find that board classification is associated with a 0.17 reduction in industry-adjusted Q.

We assume that observed firm values reflect the present value of a series of cash flows obtained under incumbent management as well as the potential cash flow improvements attributable to an acquirer. We assume that current management generates constant perpetual cash flows of x each year, 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 premiums 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:

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

In this framework the value of the firm is equivalent to a perpetuity of cash flows under the incumbent management (the first term in equation (1)), plus an additional premium due to the potential value improvements attributable to an acquisition (the second term in equation (1)). Restating the cash flow improvement (y) in terms of the bid premium (k), firm value is:

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

As reported in Table 2, we assume that takeover bidding yields a 39.09% premium for target shareholders, which is the average bid premium to takeover targets with classified boards and is somewhat higher than the average bid premiums to takeover targets without classified boards (35.93%). Given an average Q of 1.75 for firms in the classified board subsample, and assuming a discount rate of 12%, we assign a cash flow estimate of 0.178 to firms under incumbent management. This estimate of cash flows and observed Q reflects an annualized probability of takeover of 3.6% for firms with classified boards. The estimate of takeover deterrence associated with maintaining a classified board computed from the bivariate probit model in Table 7 is 2.1%. The incremental increase in Q associated with an elimination of deterrence (i.e., by increasing the likelihood of a takeover bid by 2.1% per year from the observed bidding rate of 3.6%) changes the average Q for the classified board subsample to 1.79. This inference is relatively insensitive to the parameters chosen. For example, a 50% increase in premiums (58.64%) for deals involving classified boards (deterred and observed) yields an increase in average Q for classified board firms to 1.88. Alternatively, tripling the imputed deterrence effect to 6.3%, increasing the overall probability of acquisition for classified board firms to 9.9%, increases the average implied Q, absent bid deterrence, to 1.84. Given this evidence we conclude that bid deterrence, while significant, is unlikely to account for differences in firm value commonly associated with board classification.

6.3. Board declassification and takeover activity

As noted in Table 1, firms covered by IRRC rarely alter their classification scheme, although anecdotal evidence suggests that declassification is occurring at an increasing rate. Of the 20,111 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 initial bids were

ultimately completed. Of the 49 firms that classified their board, 17 became the subject of takeover bidding (22.79%) and of these 13 of the 17 initial bids were ultimately completed. Overall, these results are not consistent with the notion that firms that declassify are subject to an extraordinary rate of takeover bidding, nor do they suggest that the decision to classify precludes subsequent takeover bidding. The relative 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 potentially are more effective as an antitakeover device because the bylaws can be amended by shareholders, whereas the corporate charter cannot be amended by shareholders without board initiative. Consistent with this view, Bebchuk and Cohen find that charter-based staggered boards drive the negative correlation between board classification and firm value in their sample. To assess the robustness of our own findings we repeat our analyses summarized in Sections 5.3 and 6.2 above using only charter-based classified boards to define classification for targets and prospective targets. In our sample, approximately 90 percent of classified boards are charter-based, and all of the results are qualitatively identical to those reported using the broader measure of board classification.

7.0 Summary and concluding remarks

Board classification is a common corporate governance structure that staggers the process of annual shareholder elections of director slates. Corporations utilizing classified board structures assemble directors into distinct classes with successive annual elections occurring only for a single class. Critics of classification contend that this governance arrangement endows management with a device to dissuade change-in-control bids, overcome unsolicited takeover attempts, or negotiate self-serving deals with friendly acquirers at the expense of target shareholders. This point of view is

frequently espoused by academics and practitioners who contend that classification systematically entrenches incumbent managers and exacerbates principal-agent problems. An alternative perspective, commonly ascribed to anti-takeover devices generally, suggests that classification is efficient in the context of corporate control events to the extent that it endows managers with leverage sufficient to deter opportunistic bidding, negotiate for higher value bids, or seek out higher-value third party suitors. In this paper we explore the veracity of these divergent views by examining the empirical relation between board classification and the likelihood of takeover bidding, deal outcomes, and concomitant shareholder welfare effects.

Our evidence suggests that target board classification is correlated with the tenor of initial bids and overall bid outcomes in observed change-in-control transactions. Specifically target firms employing classified boards are somewhat more likely to respond negatively to, and reject, initial bids, but are also more likely to become engaged in multi-bid auctions involving single and multiple bidders. Despite differences in bid characteristics and outcomes, wealth effects for target shareholders from change-in-control bids are economically equivalent across targets with and without a classified board. Overall, our results are inconsistent with the notion that board classification enables incumbent target managers to systematically obstruct observed acquisition bids or negotiate for private benefits in the transaction at the expense of their constituent shareholders.

We extend our analysis to consider the potential for bid deterrence associated with board classification. Binomial probit models of takeover likelihood indicate that board classification is negatively correlated with the probability of a takeover bid, however, the statistical and economic significance of classification in these models is negligible. In order to control for potential endogeneity in a firm's decision to maintain a classified board and a firm's corresponding exposure to change-in-control bids we estimate probit regressions modeling these two likelihoods simultaneously. Controlling for endogeneity our empirical specification suggests that board classification reduces a firm's likelihood of becoming a takeover target by 2.1%; a significant effect

given an average annual rate of takeover activity of 3.6% for classified board firms generally. Employing reasonable parameters, the economic impact of eliminating implied deterrence can account for approximately 20% of the observed difference in firm value between firms that do and do not employ a classified board structure.

The results of this work yield several important implications for both academics and policy makers concerned with the interrelation between board classification, corporate decision making, and firm value. Our empirical results suggest that board classification does not perceptibly alter the value of change-in-control bids for target shareholders. Given this evidence we question the empirical basis underlying recent calls for an enhanced standard of regulatory or judicial scrutiny over transactions involving targets with classified boards. In this context we also reiterate a concern that proposals to dismantle anti-takeover measures, specifically in the context of bid negotiation, are likely to lead to a commensurate reduction in bid quality for prospective target shareholders.

Our work also provides the large-sample conditioned evidence necessary to evaluate the conventional wisdom frequently espoused by both academics and practitioners, namely that board classification is an entrenchment device and is a direct antecedent to the destruction of shareholder value in U.S. firms that adopt such measures. Our statistical evidence indicates that classified boards do, in fact, reduce a firm's likelihood of receiving a takeover bid, however, we strongly encourage a degree of caution in interpreting this result. Our evidence does not suggest that bid deterrence can adequately account for differences in firm value between firms that do and do not employ a classified board structure. Furthermore, given our evidence concerning observed bid outcomes, and the potential benefits of board classification in deterring opportunistic bids, we can not establish that the takeover bids which otherwise might obtain in the absence of classification would be efficient for target shareholders. Finally, we note that the existing research has done little to empirically evaluate the potential shareholder benefits associated with classified board provisions or establish the causal nature of the relation between classification and value. In this light we suggest a more circumspect

policy approach be adopted by governance practitioners and analysts whose recent calls for the wholesale abolition of this common governance provision seem unwarranted and potentially damaging for shareholders.

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Table 1: Corporate governance provisions

The table summarizes the governance characteristics for 20,111 firm year observations obtained from the IRRC volumes published between 1990 and 2002. Following Gompers, Ishii, and Metrick (2003) a firms' particular governance provision is assumed to be in place during the years immediately following the publication of an IRRC volume, up to the date of the next publication. Firm year observations are not backfilled and are not included for firms dropping from IRRC coverage. Firm year observations are also 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	1396	1445	1493	1883	1696	1849
"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

Table 2: Summary of deal characteristics in merger bids 1990-2002

The table reports transaction characteristics for 849 merger and acquisition bids announced and either completed or withdrawn between 1990 and 2002 for firms covered by IRRC. Statistics are reported only for first bids in auction sequences (746 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 bid announcement. Toehold is the bidding firm's ownership stake in the target at the announcement date. A bid is classified as an equity bid if the any portion of the compensation paid to target shareholders includes the bidder's equity claim. Bids receive a hostile classification from SDC if target managers rebuff the bidder's offer. Target termination fee is an indicator variable equal to one if the bid includes a target payable termination fee. Bid premium is the share price offered to target shareholders reported by the Securities Data Corporation (SDC) deflated by the target's share price 42 trading days prior to the announcement of the first bid for the target in an auction sequence, less one. The symbols *,**,*** indicate that the subsample means (medians) for the classified board subsamples independently are significantly different from that of the no-classified board subsample at the 10%, 5%, and 1% levels, respectively.

	Targets with no classified board	**Targets with a classified board**
Bid Frequency	3.86%	3.60%
Bid rank in auction sequence:		
1	324	422
2	33	55
3	6	7
4	0	1
5	0	1
Deal Value: $ millions	3671.979	3677.280
[Number. of Observations]	(951.100)	(1088.400)
	[305]	[392]
Toehold at announcement	1.58%	1.12%
	(0.00)	(0.00)
Bid Premium	35.93%	39.09%
	(33.06%)	(35.81%)
Bid Hostility	4.94%	10.43%***
Proportion of equity bids	61.42%	57.11%
Bidding Firm Termination Fee	56.79%	52.13%
Proportion of bids structured as tender offer	14.51%	18.48%
Bid Completion	76.24%	71.09%

Table 3: Logistic regressions modeling the likelihood of initial bid hostility

The table reports logistic regressions modeling the likelihood that the response to a takeover bid is hostile. The sample consists of 746 initial merger bids for targets between 1990 and 2002 for firms covered in the IRRC handbook that also have total assets data available on Compustat. The dependent variable in the regression is set equal to one for bids associated with a hostile response by target management as defined by SDC, and is set equal to zero otherwise. Target classified board and poison pill are indicator variables equal to one if the target firm employs the respective governance feature. The deal characteristics are defined in Table 2. 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 firm in the fiscal year prior to the bid. Target debt includes short- and long-term debt issues and size is proxied by the book value of total assets for the target firm, where both characteristics are measured in the fiscal year prior to the bid. Low Q is an indicator variable equal to one for targets with a pre-bid market-to-book in the lowest half of the firm-year observations (Q<1.33) in the full sample of firm years. *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 a hostile response for a one unit increase 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 N=746	Model 2 N=668	Model 3 N=668	Model 4 N=668
Intercept	-3.376 (0.000)	-2.027 (0.012)	-2.382 (0.014)	-3.327 (0.000)
Target Classified Board	0.680 (0.029) [0.044]	0.649 (0.046) [0.040]	1.150 (0.057) [0.068]	0.765 (0.124) [0.050]
Target Poison Pill	0.787 (0.012) [0.051]	0.811 (0.015) [0.049]	1.295 (0.030) [0.077]	0.789 (0.018) [0.052]
Target Classified Board * Target Poison Pill			-0.715 (0.320) [-0.009]	
Size (log total assets)		-0.033 (0.701) [-0.002]	-0.030 (0.726) [-0.002]	0.004 (0.968) [0.000]
Debt/Assets		-0.652 (0.294) [-0.041]	-0.650 (0.297) [-0.039]	-0.505 (0.373) [-0.034]
Initial bid premium		-0.379 (0.213) [-0.024]	-0.398 (0.196) [-0.024]	-0.311 (0.330) [-0.021]
Market-to-Book (Tobin's Q)		-0.521 (0.008) [-0.032]	-0.511 (0.008) [-0.031]	
Low Q				0.327 (0.559) [0.021]
Low Q * Target Classified Board				-0.143 (0.823) [-0.000]
Chi-squared	15.64	22.44	21.02	17.88

Table 4: Logistic regressions modeling the completion of an acquisition bid or auction.

The table reports logistic regression modeling the likelihood that a proposed deal in the sample will be completed. The sample consists of 746 initial merger bids for targets between 1990 and 2002 for firms covered in the IRRC handbook that also have total assets data available on Compustat. In each model the dependent variable is an indicator equal to one if the proposed bid (or deal in the case of an auction) is ultimately consummated and is set equal to zero otherwise. Target classified board and poison pill are indicator variables equal to one if the target firm employs the respective governance feature. The deal characteristics are defined in Table 2, and target firm variables are defined in Table 3. *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 unit increase 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 First bids only (n=746)	Model 2 First bids only (N=739)	Model 3 First bids only (n=739)	Model 4 Auctions (N=739)
Intercept	1.203 (0.000)	1.291 (0.015)	0.624 (0.247)	2.393 (0.000)
Target Classified Board	-0.121 (0.514) [-0.023]	-0.048 (0.797) [-0.009]	-0.021 (0.919) [-0.003]	0.004 (0.986) [0.005]
Target Poison Pill	0.184 (0.306) [0.035]	0.165 (0.365) [0.031]	0.062 (0.757) [0.010]	0.077 (0.706) [0.011]
Hostile	-1.853 (0.001) [-0.426]	-1.837 (0.000) [-0.421]	-1.786 (0.018) [-0.393]	-1.950 (0.000) [-0.408]
Hostile * Classified Board	-0.588 (0.369) [-0.124]	-0.714 (0.285) [-0.145]	-0.803 (0.352) [-0.155]	0.050 (0.937) [0.012]
Size (log total assets)		-0.039 (0.479) [-0.007]	-0.120 (0.050) [-0.020]	-0.108 (0.070) [-0.015]
Debt/Assets		-0.309 (0.424) [-0.058]	-0.247 (0.547) [-0.041]	-0.460 (0.274) [-0.066]
Market-to-book (Tobin's Q)		0.173 (0.199) [0.033]	-0.065 (0.612) [-0.011]	0.105 (0.436) [0.015]
Toehold			0.018 (0.198) [0.003]	
Target Payable Termination Fee			0.927 (0.000) [0.166]	
Tender Offer			1.482 (0.000) [0.185]	
Stock deal			1.836 (0.000) [0.332]	
Chi-squared	53.04	57.14	143.07	50.62

Table 5: Multinomial logistic regressions modeling corporate control bid outcomes

The table reports results from a multinomial logistic regression model estimating the likelihood of various deal outcomes conditioned on the characteristics of the first bid in an auction sequence. All coefficient estimates are normalized relative to the omitted outcome of unsuccessful single bid auctions. The dependent variable in model is set equal to one for successful single bid auctions, two for unsuccessful multi-bid auctions, three for successful multi-bid auctions. The sample consists of 746 initial bids in takeover auctions, 422 bids for firms with classified boards and 324 bids for firms without a classified board. The model is estimated separately for the subsamples of firms with and without classified boards. The independent variables include firm size, measured as the natural log of total assets in the year prior to the takeover bid, an indicator equal to one if SDC codes the bid as hostile, a tender offer indicator, an indicator equal to one if the deal involves bidder equity, and an indicator for the presence of a target termination fee. *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. The marginal effects are the change in the probability of receiving an acquisition bid for a one unit increase in a continuous variable, or a shift from zero to one for an indicator variable. The final column reports the predicted probability of each outcome computed at the mean values of the independent variables.

Panel A: Classified Board Firms (n=422)							
Outcome	Intercept	Firm size	Hostile	Tender Offer	Stock Offer	Termination Fee	Predicted Probability
Single Bid	-1.255	-0.155	-3.309	2.970	1.595	1.145	0.694
Successful	(0.091)	(0.105)	(0.000)	(0.000)	(0.000)	(0.001)	
		[-0.023]	[-0.630]	[0.256]	[0.303]	[0.130]	
Multi Bid	-3.975	0.302	-0.873	0.520	-0.682	0.804	0.031
Unsuccessful	(0.013)	(0.110)	(0.261)	(0.657)	(0.256)	(0.173)	
		[0.009]	[0.027]	[-0.027]	[-0.049]	[-0.003]	
Multi Bid	-0.100	-0.127	-0.765	1.943	0.219	0.930	0.099
Successful	(0.922)	(0.345)	(0.191)	(0.004)	(0.641)	(0.031)	
		[-0.000]	[0.151]	[-0.057]	[-0.102]	[-0.004]	
Panel B: Non-Classified Board Firms (n=324)							
Single Bid	0.983	-0.110	-2.446	1.350	1.650	0.949	0.743
Successful	(0.188)	(0.274)	(0.005)	(0.025)	(0.000)	(0.011)	
		[-0.021]	[-0.494]	[0.133]	[0.288]	[0.165]	
Multi Bid	-3.549	0.229	-0.210	-35.282	-0.039	0.902	0.021
Unsuccessful	(0.001)	(0.167)	(0.870)	(0.000)	(0.969)	(-0.163)	
		[0.000]	[0.002]	[-0.019]	[-0.001]	[-0.000]	
Multi Bid	-1.171	0.072	-0.719	1.017	-0.011	-0.163	0.080
Successful	(0.245)	(0.580)	(0.354)	(0.162)	(0.984)	(0.756)	
		[0.010]	[0.077]	[-0.011]	[-0.099]	[-0.065]	

Table 6: Cumulative abnormal returns around takeover bids for target firms with and without classified boards

The table reports cumulative abnormal returns around takeover bids for firms with and without classified boards. Each panel reports cumulative abnormal returns (CARs) measured as the firm's stock return less the return on the CRSP value-weighted index beginning one trading day prior to the initial bid announcement and ending one day following the announcement date. The panels also report auction CARs computed over the period beginning 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. The final column of the table reports the expected value of a bid as the average of the cumulative abnormal returns across all possible bid outcomes. The number of observations in each category is reported in brackets in the first row of each panel. In Panel B the *p*-values for tests of differences in mean CARs between the classified board and non-classified board subsamples are reported in parentheses.

	Single Bid Unsuccessful	Single Bid Successful	Multi-Bid Unsuccessful	Multi-Bid Successful	Average Bid Value
Panel A: Classified Board Firms					
Number of Observations	[73]	[291]	[13]	[41]	[418]
CAR {-1,+1}	0.110	0.196	-0.015	0.237	0.179
CAR {-42, Auction End}	0.037	0.296	-0.078	0.516	0.262
Panel B: Non Classified Board Firms					
Number of Observations	[50]	[239]	[7]	[26]	[322]
CAR {-1,+1}	0.162	0.181	0.083	0.184	0.176
p-value for difference in CARS	(0.143)	(0.397)	(0.527)	(0.478)	(0.885)
CAR {-42, Auction End}	-0.030	0.309	-0.006	0.360	0.252
p-value for difference in CARS	(0.407)	(0.651)	(0.881)	(0.182)	(0.727)

Table 7: OLS regressions on target announcement and auction CARs.

The table presents OLS regressions of target cumulative abnormal returns (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 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. Deal and firm characteristics are defined in Tables 2 and 3, respectively. p-values based on robust standard errors are in parentheses.

Model **Return estimate** **Daily CAR interval**	**Model 1** **Announcement CAR** **(-1,+1)**	**Model 2** **Announcement CAR** **(-1,+1)**	**Model 3** **Auction CAR** **(-42, End)**	**Model 4** **Auction CAR** **(-42, End)**
Number of observations	734	734	734	734
Intercept	0.135 (0.008)	0.135 (0.008)	0.135 (0.092)	0.134 (0.093)
Target Classified Board	-0.004 (0.800)	-0.002 (0.880)	0.010 (0.734)	0.012 (0.695)
Target Poison Pill	0.021 (0.165)	0.021 (0.171)	0.040 (0.174)	0.040 (0.179)
Hostile	0.058 (0.021)	0.072 (0.068)	0.127 (0.007)	0.150 (0.061)
Hostile * Classified Board		-0.021 (0.658)		-0.032 (0.718)
Deal (Auction) Status (1=Completed, 0= Withdrawn)	0.064 (0.002)	0.063 (0.003)	0.375 (0.000)	0.375 (0.000)
Prior bidding indicator			0.041 (0.435)	0.041 (0.434)
Stock offer indicator	-0.048 (0.013)	-0.048 (0.013)	-0.071 (0.044)	-0.070 (0.044)
Tender offer indicator	0.086 (0.001)	0.086 (0.001)	0.043 (0.324)	0.043 (0.323)
Bidder toehold	-0.002 (0.010)	-0.002 (0.010)	-0.003 (0.069)	-0.003 (0.065)
Size (log total assets)	-0.017 (0.001)	-0.017 (0.001)	-0.020 (0.048)	-0.020 (0.048)
Market-to-book (Tobin's Q)	-0.025 (0.005)	-0.025 (0.005)	-0.037 (0.044)	-0.037 (0.045)
Debt/Assets	-0.010 (0.787)	-0.009 (0.797)	0.039 (0.632)	0.040 (0.626)
Year Dummies	Yes	Yes	Yes	Yes
F-statistic (*p*-value)	8.63 (0.000)	8.49 (0.000)	10.64 (0.000)	10.42 (0.000)
Adjusted R^2	0.138	0.138	0.199	0.199

Table 8: 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. The sample consists of 20,111 firm year observations between 1990 and 2002 for firms covered in the 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. Deal characteristics are defined in Table 2, and target variables are defined in Table 3, with the exception of pre-bid abnormal return, which is measured as the rolling mean monthly abnormal return over the twelve months prior to the calendar year of the observation in the panel. *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. The marginal effects are the change in the probability of receiving an acquisition bid for a one unit increase in a continuous variable, or a shift from zero to one for an indicator variable.

	Model 1 N=19,197	Model 2 N=19,197	Model 3 N=18,072	
	Takeover Target	Takeover Target	Takeover Target	Classified Board
Target Classified Board	-0.050 (0.164) [-0.003]	-0.086 (0.026) [-0.006]	-0.442 (0.094) [-0.021]	
Target Poison Pill		-0.011 (0.764) [-0.001]		
Super Majority		-0.075 (0.129) [-0.005]		
Limits to Bylaw Amendment		-0.019 (0.683) [-0.001]		
Limits to Charter Amendment		0.164 (0.087) [0.012]		
Golden Parachute		0.289 (0.000) [0.018]		
Size (log total assets)	-0.065 (0.000) [-0.004]	-0.067 (0.000) [-0.004]	-0.048 (0.001) [-0.002]	-0.020 (0.322)
Pre-bid abnormal return (%)	-2.151 (0.043) [-0.144]	-2.119 (0.048) [-0.136]	-3.023 (0.013) [-0.124]	0.979 (0.184)
Debt/Assets	0.152 (0.012) [0.010]	0.128 (0.037) [0.008]	0.174 (0.084) [0.007]	-0.086 (0.504)
Market-to-book (Tobin's Q)	-0.084 (0.000) [-0.006]	-0.073 (0.000) [-0.005]	-0.094 (0.001) [-0.004]	-0.037 (0.013)
Board Size (log)				0.104 (0.007)
Industry Indicators	Yes	Yes	Yes	Yes
Year Indicators	Yes	Yes	Yes	Yes
Rho				0.247 (0.126)
Chi-squared	403.99	467.91	6,321.12	