

Board Composition, Board Effectiveness, and the Observed Form of Takeover Bids

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We show that bidding firms consider target board characteristics when deciding takeover offer types and initial offer premiums. We study a sample of 436 proposed negotiated mergers and bypass offers. Firms with individuals holding the titles of both chief executive officer (CEO) and board chair are more likely to receive bypass offers. These offers are more likely to be successful and generate higher target shareholder gains over the takeover offer period. When the target's board is independent, the target is less likely to receive a high premium and the offer is less likely to succeed.

In this article, our purpose is to examine whether the type of initial offer is related to the target's board structure. We examine the effect of target board characteristics on 436 initial takeover offers (negotiated mergers and bypass offers). We define a bypass offer as an unsolicited tender offer for a controlling majority interest in a target that is outwardly unanticipated by management and the board of directors.

In the market for corporate control, there are usually two types of bidder takeover strategies. The first is a negotiated merger, in which the bidding firm negotiates the offer it makes with the target's board of directors and incumbent management. The second is an unsolicited tender offer, in which the bidder does not negotiate the initial public offer it makes with the board of directors and incumbent management, but instead makes a direct offer to the target firm's shareholders to purchase their shares.

Berkovitch and Khanna (1991) indicate that the choice of offer type depends on the actions of the target managers, which in turn depends on

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their contracts. Thus managers may be placed in situations in which the interests of shareholders are at odds with their own. When events create a conflict of interest between shareholders and managers, shareholders depend on the board of directors to represent their interests. The board is charged with ensuring that the interests of shareholders supercede those of the managers.

To date, little work has been done on the form of control contests and the role played by the target's board of directors.¹ Schwert (2000) examines whether hostile takeovers can be distinguished from friendly takeovers based on accounting and stock performance. Unable to confirm that hostile offers differ from friendly deals in economic terms, Schwert (2000) concludes that the distinction is "largely a reflection of negotiation strategy." However, he does not consider target board characteristics as a determinant of the negotiation strategy.

In addition to choosing the offer type, the bidder also sets the initial offer price. The initial offer premium might be set to encourage the target board to accept the offer [Hirshleifer and Thakor (1994)]. Also, the offer premium and medium of exchange could be used to preempt a competing bid [Fishman (1989)]. Therefore we investigate the effect of target board characteristics on the form of the initial takeover offer (negotiated compared to non-negotiated), the initial offer premium, and the presence of a competing bid. We also examine the relation between the observed offer terms and both the offer outcome and shareholder wealth gains.

Our findings suggest that bidders consider target board characteristics when determining the initial form of the offer. We observe that bidders are less likely to negotiate the publicly observed offers they make with management and the board of directors in the presence of larger boards, and an individual holding both positions of chairperson and chief executive officer (CEO). In addition, the likelihood that a takeover offer succeeds is higher if one person holds the titles of both CEO and board chair. Finally, we find that total shareholder gains are higher when target firms have combined leadership structures.

The article is organized as follows. We develop the conceptual framework in Section 1. In Section 2 we discuss the sample selection process and the definitions of the variables we use in the study. In Section 3 we consider the relation between the form of the takeover offer, the initial offer premium, the existence of a competing bid, and board/management characteristics. We also investigate the success of the takeover offer and shareholder wealth gains in Section 4. Section 5 concludes.

¹ See Hermalin and Weisbach (2001) for a survey of the economic literature on boards of directors.

1. Conceptual Framework

1.1 The initial offer

Jensen and Meckling (1976) focus on the agency conflict created by the separation of ownership and control in a public corporation. One event where managers' interests often diverge severely from those of shareholders is in a merger or takeover. The literature shows that target shareholders have large wealth gains at the announcement of a takeover [e.g., Andrade, Mitchell, and Stafford (2001)] and wealth losses when a takeover bid fails [e.g., Ruback (1988)]. Conversely, managers' interests are not always best served by accepting takeover offers. Managers gain financially from increases in the value of their shares and from golden parachutes, but they are likely to lose compensation and perquisites if they are displaced after a successful takeover. When a takeover offer creates a conflict of interest between shareholders and managers, the oversight provided by the board of directors assumes critical importance for shareholders.

The board of directors is charged with protecting and promoting the interests of shareholders. The board of directors is presumed to carry out the monitoring function on behalf of shareholders because the shareholders would find it costly to exercise control due to wide dispersion of stock ownership.²

The monitoring effectiveness of the board is typically viewed in the empirical literature as a function of its independence, size, and leadership structure. Thus our analysis considers the role played by independent outside directors, whom we define as non-employee directors without ties to the firm other than their directorships. If independent outside directors really do perform a monitoring role, as argued by Fama (1980) and Fama and Jensen (1983), then boards dominated by outsiders are more likely to make decisions consistent with shareholder-wealth maximization. With a negotiated offer, the independent board would accept an offer price that maximizes the expected value of cash flows accruing to shareholders. However, a target's board that is aligned with management may demand too high a bid price or work to defeat any offer whatsoever, leading to a lower probability that the negotiated offer will succeed. Then, all else being equal, a bidder is more likely to choose a bypass offer with a non-independent board.

Although the board's capacity for monitoring may increase as more directors are added, the benefit might be outweighed by the incremental

² In addition to its monitoring role, only the board has the authority and responsibility to call for a meeting of the shareholders to approve an acquisition of any type. More specifically, the boards of both parties must meet and approve the final form of the agreement. The appropriate officers then sign the agreement. The target board then files a proxy statement with the Securities and Exchange Commission (SEC) detailing the agreement and distributes the agreement and calls for a special meeting of the target shareholders where a formal vote can take place.

cost of poorer communication and decision making associated with larger groups. This viewpoint has been advanced by Lipton and Lorsch (1992) and endorsed by Jensen (1993). Thus limiting the size of the board may improve efficiency. Yermack (1996) presents evidence consistent with theories that small boards of directors are more effective. We would expect that firms with larger boards receive more bypass offers. Our reasoning is that a larger board of directors may not be able to function as a controlling body, thus leaving management with more discretion.

Arguments exist in favor of, as well as opposed to, giving one person both the CEO and board chair positions [Baliga, Moyer, and Rao (1996)]. There is no clear link between leadership structure, on its own, and firm performance or managerial behavior [Baliga, Moyer, and Rao (1996), Brickley, Coles, and Jarrell (1997)]. One explanation is that other governance mechanisms (e.g., independent boards) counteract the negative aspect of a combined leadership structure [McWilliams and Sen (1997), Coles and Hesterly (2000)]. If the majority of the board is composed of independent outside directors, then presumably the board is more closely aligned with shareholders and the firm's managers are subject to effective monitoring. This logic suggests that a target with a combined leadership structure is more likely to receive a bypass offer, but that the effect is attenuated when the target has an independent board.

1.2 The initial offer premium

When structuring a bid for control of a firm, one of management's objectives might be to discourage competitors from entering the control contest. Giammarino and Heinkel (1986), Fishman (1988), and Hirshleifer and Png (1989) suggest offering a large premium over the target's current market value may be an effective way to preempt competition. Furthermore, it is possible that a high offer premium indicates that the initial bidder has a high valuation of the target and may aggressively fight a competing bid.

Hirshleifer and Thakor (1994) suggest that suspicion on the part of the bidder that the target board is aligned with management makes the target's shareholders better off by inducing a higher bid. The intuition is as follows. A board that is aligned with management will require a bid premium above the reservation price of shareholders in order to compensate managers for the personal losses that managers will suffer from the takeover. We would expect a higher offer premium for targets with non-independent boards, combined leadership structure, and/or large boards.

1.3 The outcome of the initial offer

We also consider the success of the initial offer and the gains that accrue to target shareholders. A decision to accept a takeover offer is often made by managers with a group of influential shareholders and the directors of the

firm. A board of directors that is aligned with management will seek to protect management to the extent possible. If a takeover is successful, target firm managers can suffer significant losses in compensation and other control benefits.³ This reasoning suggests that a takeover offer will be less successful when the board of directors is aligned with management.

A board that is aligned with shareholders should seek to maximize the expected value of cash flows accruing to the shareholders. However, if outside directors do not want to jeopardize their positions on the board, they will be reluctant to accept a takeover offer. Kini, Kracaw, and Mian (1995) show that successful takeovers typically result in the elimination of the target board or in the reduction of the number of outside directors. Harford (2003) concludes that, at the margin, financial considerations (loss of directorship income) lead outside directors in the direction of resisting possible acquisitions that are in shareholders' interests. These conflicting motivations leave us without a clear prediction for the relation between takeover success and board independence.

Finally, we examine target shareholder wealth gains. If independent outside directors perform a monitoring role, then independent boards are more likely to make decisions consistent with shareholder wealth maximization. Therefore we expect that average target shareholder gains will be greater for targets with independent boards than for other targets. Cotter, Shivdasani, and Zenner (1997) provide evidence that independent outside directors enhance target shareholder gains from tender offers.

2. Data Collection and Variables

2.1 Data sources

We develop a sample of both successful and unsuccessful acquisition proposals. This allows us to consider both the initial offer characteristics and the final outcome of the bids. Successful acquisitions are more easily identified. Initially we examine the Compustat Research Status Report of May 1991 to identify firms that have an acquisition or merger deletion code dated prior to January 1, 1991.⁴ We use the Dow Jones News Retrieval Service (DJNRS) to identify the bidding firms and gather the data necessary for the study, including information on the targets. These data include the first announcement date of the takeover offer, the resolution date, the initial bidder, the stock holdings of the bidder, the

³ Walking and Long (1984), Martin and McConnell (1991), Agrawal and Walkling (1994) and Cotter and Zenner (1994) document managerial losses in takeover contests. For empirical evidence on takeover-related management turnover, see Klein and Rosenfeld (1988) and Kini, Kracaw, and Mian (1995).

⁴ Schwert (2000) indicates that after 1991 there was a statistically significant shift away from unsolicited tender offers. Consistent with Schwert, of the 165 bypass offers in our study, only one occurred in 1990, and five occurred in 1989, as compared to 23 that occurred in 1988.

acquisition offer outcome (successful or not), the presence of multiple bidders, the target management reaction, the initial and final acquisition offer prices, and the proportion of shares sought by the bidder.

To construct the sample of unsuccessful acquisitions we use the DJNRS text search tool. This procedure allows us to specify key words or phrases that indicate the failure of a proposed acquisition.⁵ We then identify those firms that actually report failed acquisition attempts and the parties involved. Again, we use the DJNRS to gather the necessary data.

To be included in the sample, the proposal must be an initial offer to obtain a controlling majority interest in a clearly identified target firm by an identifiable business entity that is not a majority shareholder of the target. Furthermore, the initial announcement must identify the terms of the proposal clearly enough to determine if the bid is a negotiated offer or a bypass offer.

In addition to the DJNRS we use several data sources for the variables needed for our analysis. We use the target's last proxy statement filed prior to the first acquisition offer announcement to collect information on the board of directors, target managers, block holders, and golden parachutes. Our accounting data come from Compustat. We use the last fiscal year-end prior to the acquisition offer announcement for the Compustat financial data because these are the most recent data for many of the firms involved in successful offers. Using financial data for the same year as the offer would introduce a survivorship bias because unsuccessful offers would represent a significant portion of the remaining sample. We obtain all stock return data from the Center for Research in Securities Prices (CRSP) at the University of Chicago. We collect poison pill data from the database used in Schwert (2000). We supplement these data using keywords from the DJNRS.⁶

We eliminate observations if (1) the target is in a regulated industry (e.g., utility, financial institution), (2) it has dual-class common stock, (3) it is in financial distress, (4) data on takeover characteristics or the target are unavailable from the DJNRS or the proxy statement, and (5) there are insufficient financial data either on CRSP or Compustat. We eliminate firms in regulated industries because regulation may affect their board composition, ownership structure, and the acquisition process. Thus it is not possible to compare them to industrial firms. We eliminate firms with dual-class common stock because of potential problems in evaluating board member and manager ownership. We drop firms in financial distress because of the reduced influence of managers and other stockholders

⁵ Key phrases consisted of all combinations of the nouns merger, acquisition, bid, offer, takeover, agreement, and negotiation, and the verb roots reject, cancel, terminate, conclude, retract, off, end, drop, collapse, withdraw, and discontinue.

⁶ These data are available on Schwert's website: <http://schwert.ssb.rochester.edu>.

on the acquisition process. Imposing these data requirements produces a sample of 436 proposed acquisitions that are traded on the New York and American Stock Exchanges. The data screening process has little impact on the overall sample size or selection.

Since we rely on Compustat and the DJNRS as the source of both successful and unsuccessful acquisition proposals, we acknowledge that we bias our sample in favor of large publicly traded firms. Large firms may be less vulnerable to takeover bids, all else being equal, because of the financing constraints facing bidders. Alternatively, smaller firms often have more concentrated ownership that might make them more difficult to acquire via an unsolicited offer. Also, the negotiation strategy used by bidder firms for smaller firms may have unique characteristics that are not present for the larger firms that are investigated in this study. The reader should not ignore these potential sources of bias in interpreting our results.

2.2 Bypass and negotiated offers

Our primary concern is what motivates a bidder to construct an offer that it has not negotiated with the board of directors and incumbent management.⁷

Once the bidder firm's managers find an acquisition target, they must decide whether to approach target management about the acquisition to discuss and negotiate the acquisition with the target firm's management. Several outcomes are possible. First, the bidder and target agree on the acquisition. Mergers and cases where the parties involved agreed in principle to combine, including agreements that the bidders would commence tender offers, are classified as negotiated offers.

One example is the merger between Avery International Corp. and Dennison Manufacturing Co. On May 25, 1990, Avery International and Dennison Manufacturing said they had agreed to merge in a stock-swap transaction. The value of the transaction was about \$500 million, based on the closing price of CEOs Avery stock on May 24. When we reviewed all news releases from the DJNRS, this appeared to be the first public announcement of the combination. However, our investigation of the proxy statement filed on December 26, 1990, showed that as early as 1987, the CEOs of Avery and Dennison met several times to discuss a possible merger. The Avery and Dennison boards of directors were also involved in these discussions. We classify such offers as successful negotiated offers.

⁷ As noted above, we construct our sample using the DJNRS. Identifying offer type, particularly bypass offers, from news articles may not fully incorporate bargaining between the bidder and target management prior to the first public announcement of the offer. Therefore we supplement the news articles by examining the discussion sections contained in SEC filings surrounding the acquisition announcements. While the information availability is limited, it does not contradict our classification of takeover offers based on news articles.

Another possibility is that the bidder and target will not agree on the acquisition, in which case the bidder may make no further attempts to acquire the target. For example, on August 19, 1988, the Dow Jones Newswire reported that PPG Industries, Inc. agreed to acquire Grow Group Inc. for about \$233 million. On September 6, 1988, PPG Industries exercised its right and canceled the merger agreement with Grow Group. The proxy statement filed on October 24, 1988, showed that on August 22 and 25, 1988, two class actions were begun against the Grow Group, its directors, and PPG Industries. The proxy statement gave no further information related to the canceled merger. We identify this as an unsuccessful negotiated offer.

The bidder firm's management can choose to make an offer that is not negotiated with the target firm's management. For example, on August 8, 1988, C3, Inc. announced that they had agreed to meet with Knoll Capital Management L.P. to discuss a possible partnership interest in C3. The announcement revealed that Fred Knoll, chief executive of Knoll Capital, had acquired a 9.6% stake in C3. On September 29, 1988, Knoll made a formal acquisition offer to C3's management, in spite of an earlier discussion between the two parties that did not lead to a negotiated resolution. Investigation of the proxy statement filed on October 26, 1989, indicates that C3 had no substantive discussions with Knoll Capital other than a letter of interest dated June 21, 1988. What is striking about this example is that C3 had been searching for a potential buyer for several years. Why Knoll Capital chose to proceed with an offer it had not negotiated with the incumbent management and the board remains an open question.

Situations such as this are the main focus of this study. We classify unsolicited tender offers that are outwardly unanticipated by the target's management and board of directors as bypass offers. As these examples illustrate, our focus is on the form of the offer and not on the distinction between "friendly" and "hostile." In particular, our use of the word "negotiated" does not imply a friendly offer, but rather a private negotiation. The characterization of an offer as being a bypass offer means that the offer is not negotiated between the bidder and the target. The classification of offer type is based on the initial offer that is disclosed in the DJNRS database. As a result, bypass offers can include both non-negotiated offers in which no prior contact has taken place between the bidder and the target, as well as cases in which private negotiations fail and therefore the first publicly announced offer is not negotiated. As a result, bypass offers include a high proportion of offers where management resists, but not all bypass offers are resisted.

Bypass offers can also include cases in which the bidder, observing the characteristics of the target's board, decides to circumvent target management completely and proceed directly with an offer to shareholders. Given

the high proportion of resisted non-negotiated offers, we note that our results can have two possible interpretations. The results could be consistent with target board characteristics influencing when a bidder chooses to proceed with a non-negotiated offer. It is also possible that the results are an indication of target management that is likely to resist initial overtures from the bidder.

2.3 Offer premiums and shareholder gains

We calculate the offer premium (*Offer Premium*) as the ratio of the difference between the offer price and the stock price 20 trading days prior to the offer to this same stock price. Approximately 70% of the sample offers are for cash. The determination of an offer price is straightforward for these takeover offers. For the remaining 30% of the sample in which an exchange of stock occurs, we determine the offer price based on the bidder's stock price and the exchange ratio between the two firms.

To ensure that changes in the bidder's stock price do not affect the reported results, we also consider the offer price (in both stock and cash offers) 10 and 15 trading days prior to the offer. We note that with negotiated offers, the initial price is jointly set through the negotiations between the bidder and the target.

We also evaluate the wealth gains to the target shareholders. Similar to Schwert (1996, 2000), the total takeover premium is composed of two parts, runup and markup. We measure *Runup* as the cumulative market-adjusted abnormal return to the target's stock in the two months before the first bid (trading days $(-42, -1)$). We measure *Markup* as the cumulative market-adjusted abnormal return to the target's stock in the six months after the first bid (trading days $(0, 126)$) relative to the first bid.

We determine both *Runup* and *Markup* by using the market model with the return on the CRSP equally weighted index. In estimating the market model we use 250 trading days of data over the period $(-750, -501)$ prior to the announcement date. Sensitivity tests on our model specification and period choice produced similar results to those reported.

2.4 Measures of board effectiveness

We use three measures to gauge the degree to which the board of directors is aligned with shareholders. The standard view in both empirical finance and in practice is that the degree of board independence is closely related to its composition. The board is presumed to be more independent as the number of outside directors increases. We define independent outsiders (*Outsiders*) as all directors with no direct ties to the target firm (e.g., prior employment, business connections, or consulting agreements). We define inside directors (*Insiders*) as all directors who are current or past employees of the firm and their immediate families. We define boards as independent when outside directors occupy a majority of the board seats. Our

analysis includes a binary variable (*Independent*) that takes the value of one if independent outside directors represent more than 50% of the board.

Larger boards reflect more complex organizations. Therefore top management may have trouble persuading board members to agree and make decisions. In addition, a larger board of directors may not be able to function effectively as a controlling body, thus leaving management relatively free to make decisions. Therefore our measures of board effectiveness include the number of directors on the board (*Board Size*).

The arguments against combining CEO and board chair positions suggest that combining the positions may hinder the board's ability to perform its oversight function during the takeover process. Thus it is precisely when the CEO and board chair positions are combined that monitoring by independent outside directors matters the most. We include a binary variable equal to one if the same person holds both titles CEO and board chair of the target firm, and equal to zero otherwise (*Chair/CEO*). We also include an interaction variable that is equal to one when the target's board is independent and the target has a combined leadership structure, and zero otherwise (*Indep*Chair/CEO*).

2.5 Other related influences

We include explanatory variables that can influence the dependent variable regardless of board characteristics. These variables are ownership structure, managerial wealth, takeover offer characteristics, firm characteristics, and takeover defenses.

We control for prior stockholdings of the bidder by considering the percentage of shares held by the bidding firm (bidder toehold) before making a takeover offer (*Prior*). Betton and Eckbo (2000) find that toeholds and offer premiums are negatively correlated. A toehold, as the first step in an unsolicited bid, can trigger resistance by the target board [Holderness and Sheehan (1985)]. On the other hand, a toehold can facilitate a bidder's offer and reduce the effectiveness of target resistance [Jennings and Mazzeo (1993)]. A bidder's toehold can also affect offer success [Walkling (1985), Hirshleifer and Titman (1990), Betton and Eckbo (2000)].

Affiliated block holders typically side with management in corporate control contests [Shleifer and Vishny (1986), Barclay and Holderness (1991)]. Affiliated block ownership includes ownership by family trusts, company stock ownership plans, and retirement plans. If the proxy statement describes an officer of the firm as being an officer or trustee of a block, then we place the block in the affiliated block-holder category. We treat block and non-block ownership by inside directors as one variable and define these holdings as insider holdings (*Insider Holdings*). We define the holding of the outside directors (*Outsider Holdings*) as the percentage of

shares held by independent outside directors. Demsetz and Lehn (1985) suggest that a large shareholder, unaffiliated with management, can monitor management. Shleifer and Vishny (1986) argue that unaffiliated large shareholders can also facilitate changes in control. We also control for the percentage of shares owned by unaffiliated block holders (*Block*).

We control for two factors that affect managers' incentives. The first is insider stock ownership (*Insider Holdings*) which also includes block and non-block ownership by inside directors. Mikkelsen and Partch (1989) and Cotter and Zenner (1994) show that, with greater share ownership, managerial gains from a tender offer will be larger and managerial resistance less likely. The ownership measure includes both stock owned outright and options that are exercisable currently or within 60 days. Managerial stock options are often issued at-the-money. If the options fall out-of-the-money, the strike price is often reset so the options are at-the-money. In a successful takeover offer, managers will be able to exercise their options (exercisable within 60 days) before the completion of final merger and delisting. Therefore we assume that the options are at-or in-the-money and that the options are counted as shares of stock.

The second managerial incentive factor is the presence of a golden parachute for top managers. Golden parachutes can reduce managerial compensation losses from takeovers and thereby reduce managerial incentives to resist an offer and bargain for premium revisions. We add a binary variable (*Gold*) that takes the value of one if the target firm management has a golden parachute in place and zero otherwise.

We also control for two characteristics of the takeover process, the existence of multiple bidders and the medium of exchange. We define an offer as having multiple bidders (*Compete*) if more than one party formally makes a bid for the firm. Similar to the initial bidder, a competing bid must be an offer to obtain a controlling majority interest in the target firm by an entity that is currently not a majority shareholder of the target. In most cases, multiple bidders will benefit shareholders: the larger the number of options the better. Multiple bidders can also impact managers who may oppose transfer of control or who may have preferences for one of the bids that they invited. If managers' primary concern is to maintain control, they would oppose all bids. On the other hand, faced with multiple bids, target managers may conclude that a takeover is inevitable and focus their energy on generating an offer that maximizes the value of their shares.

According to Fishman (1989), the payment method affects competition because a cash payment can be used as a signal by high-valuation bidders.⁸ Jennings and Mazzeo (1993) find a negative relation between resistance

⁸ Hansen (1987), Berkovitch and Narayanan (1990), Eckbo, Giammarino and Heinkel (1990), and Brown and Ryngaert (1992) also stress the signaling benefit of cash as a payment method.

and the percentage of the offer represented by cash. Schwert (2000) finds that cash is more likely to be offered as a means of payment in hostile offers. The empirical support for the payment method as a determinant of the offer outcome is mixed [Jennings and Mazzeo (1993) and Betton and Eckbo (2000)]. Our analysis uses a binary variable (*Cash*) equal to one if the bidder makes a cash offer and zero otherwise.

To control for firm size we use the value of total assets (*Total Assets*) of the target firm (in millions) measured as Compustat item 6 for the last fiscal year-end prior to the announcement and use (*Size*) measured as the natural logarithm of Compustat item 6 for the last fiscal year-end prior to the announcement. Schwert (2000) shows that, conditional on a takeover offer being received, larger target firm size increases the likelihood that a takeover bid will be hostile. We also consider the market value of equity of the target firm (*Market Value of Equity*) (in millions) (measured as the product of Compustat items 24 and 25 for the last fiscal year-end prior to the announcement).

One motive for a takeover offer bid is for the bidder to realize any gain by removing target management for poor performance [Morck, Shleifer, and Vishny (1988)]. Bad management is more likely to resist an acquisition, which increases the likelihood that a bidder chooses a bypass offer. We measure performance with the growth in sales (*Growth*), which we measure as the percentage change in Compustat item 12, defined as $(12_t - 12_{(t-1)})/12_{(t-1)}$, where subscript t represents the last fiscal year-end prior to the announcement. This choice is based on the empirical evidence documented in Lakonishok, Shleifer, and Vishny (1994, p. 1550), who “measure past growth by growth in sales since sales is less volatile than either cash flow or earnings.” The evidence in Schwert (2000) indicates that firms with higher sales growth are less likely to receive hostile takeover offers.⁹ We also measure past performance by using the market model and daily stock return data. We calculate the cumulative average prediction error (*CAPE*), which is a market-adjusted abnormal return for the period 2 years prior to 60 days before the takeover offer.¹⁰

Control models of ownership structure, such as that by Stulz (1988), show that managers can use debt to concentrate their percentage voting control, thereby increasing their ability to extract a higher takeover premium. Novaes and Zingales (1995) and Zweibel (1996) construct models

⁹ Palepu (1986), Shivdasani (1993), and Schwert (2000) all use a similar measure. We also employ several accounting-based performance measures. These include return on assets, the change in return on assets, return on sales, the change in return on sales, growth in employees, the change in operating income scaled by market value of equity, and the change in market value of equity. The results (available from the authors) are similar to those reported below.

¹⁰ The cumulative average prediction error (CAPE) for days (–500, –61) was determined using the market model with the return on the CRSP equally weighted index. In estimating the market model, 250 trading days of data were used over the period (–750, –501) prior to the announcement date. Sensitivity tests on our model specification and period choice produced similar results to those reported.

in which managers use debt, not because it benefits shareholders, but because it reduces the threat of a hostile takeover. Billett (1996) suggests that overt control threats are more likely to arise if the manager has not maintained adequate leverage. However, Schwert (2000) does not find a systematic relation between hostile takeover bids and the leverage of the target firm. We measure leverage (*Leverage*) with the ratio of long-term debt to assets (measured as the ratio of Compustat item 9 to Compustat item 6 for the last fiscal year-end prior to the announcement).¹¹

Managers' takeover defenses include staggered boards and poison pills.¹² With a staggered board, only a few directors are elected at any one time. Business benefits of board stability and board independence are often cited to justify staggered boards. Staggered boards can make unsolicited takeovers more difficult. To gain control of a target's board a bidder may have to wait three years or more—a deterrent for even the most determined bidders. We measure the presence of a staggered board (*Staggered*) as a binary variable that takes the value of one if the board of directors has staggered terms and zero otherwise. We control for the presence of poison pills because these can increase the board's ability to defeat an unsolicited offer [Malatesta and Walkling (1988) and Ryngaert (1988)]. Alternatively, as suggested by Comment and Schwert (1995), poison pills enhance the board's bargaining power. We measure the presence of a poison pill (*Poison*) as a binary variable that takes the value of one if a poison pill is in place and zero otherwise.

2.6 Descriptive statistics

Panel A of Table 1 reports summary statistics for the 436 initial takeover offers in our sample. Panel A shows that the sample contains 165 (37.8%) bypass offers and 271 (62.2%) negotiated offers. Consistent with Schwert (2000), we see that bypass offers are more likely to receive competing offers (*Compete*). Competing offers for the same target occur in 60 bypass offers (36.4%) and 43 negotiated offers (15.9%). The null hypothesis that the difference in competing bids between bypass and negotiated offers is zero is rejected at the 1% significance level.

¹¹ We also consider the debt to equity ratio, the debt to total capital ratio, and the change in long-term debt to total assets. As noted, we focus our attention on the last fiscal year-end prior to the takeover announcement and measure a one-year change in long-term debt ending the last fiscal year-end prior to the offer. The results are similar to those reported below.

¹² Antitakeover legislation varies by state and may influence the bidder's choice of type of acquisition offer. However, as Romano (1993) stresses, there was essentially no effective antitakeover legislation at the federal or state level between 1980 and the Supreme Court's upholding of the Indiana law in 1987. Following this ruling, a majority of states passed new antitakeover laws. Most of the new laws took effect between 1987 and 1989, but notable laws in Pennsylvania and Delaware did not take effect until 1990, which is the end of our sample period. We run our tests with a binary variable equal to one if the target firm is incorporated in a state that passed a second-generation antitakeover law during our sample period. The state code is never significant and the results are unchanged from those reported. The results are available from the authors on request.

Panel D: Target firm characteristics

Market Value Equity (\$M)	374.1	111.5	392.4	132.6	362.9	104.1	0.682	0.230
Total Assets (\$M)	1,099.7	201.6	1,043.2	207.6	1,134.2	187.8	0.880	0.245
Growth (%)	9.7	8.6	6.1	7.7	11.9	9.9	0.022	0.014
Leverage (%)	20.6	19.4	18.9	17.8	21.6	20.2	0.075	0.102
CAPE (days “-500” to “-61”) (%)	-1.5	0.0	0.3	3.9	-2.6	-1.8	0.693	0.415

Panel E: Target firm ownership structure

Insider Holdings (%)	12.8	4.4	9.4	2.9	14.8	6.6	0.001	0.002
Outsider Holdings (%)	3.1	0.2	3.1	0.2	3.1	0.3	0.973	0.529
Block (%)	9.1	6.2	9.1	6.7	9.1	6.1	0.980	0.547
Prior (Bidder Toehold) (%)	5.4	0.0	4.3	0.0	6.0	0.0	0.251	0.190

Compete and *Cash* take the value of one if there are multiple bidders and the bidder makes a cash offer, respectively, and zero otherwise. *Successful Offers* and *Resisted Offers* are binary variables that take the value of one if the initial offer is successful and the target resists the initial offer, respectively. *Board Size* is the total number of individuals who comprise the board of directors. Binary variables that take the value of one are *Staggered* if the board of directors has staggered terms and *Poison* if a poison pill is in place. *Insiders/Outsiders* are the percentage of board representation by inside directors and independent outside directors, respectively. *Independent* is a binary variable that takes the value of one if the titles of chairperson and CEO are when independent outside directors represent more than 50% of the board. *Chair/CEO* is a binary variable that takes the value of one if the titles of chairperson and CEO are combined. *Offer Premium* is the difference between the offer price and the actual stock price 20 trading days prior to the offer, over this same stock price. *Runup* is the cumulative market-adjusted abnormal return to the target's stock in the two months before the first bid (trading days (-42, -1) relative to the first bid). *Markup* is the cumulative market-adjusted abnormal return to the target's stock in the six months after the first bid (trading days (0, 126) relative to the first bid). *Premium* equals *Runup* plus *Markup*. *Market Value of Equity* (in millions) is the product of Compustat items 24 and 25 for the last fiscal year-end prior to the announcement. *Total Assets* (in millions) is Compustat item 6 for the last fiscal year-end prior to the announcement. *Growth* equals the percentage change in Compustat item 12, defined as $(12_t - 12_{t-1})/12_{t-1}$, where subscript t represents the last fiscal year-end prior to the announcement. *Leverage* is the ratio of Compustat item 9 to Compustat item 6 for the last fiscal year-end prior to the announcement. *CAPE* is the cumulative average prediction error or abnormal return from days (-500, -61) prior to the takeover bid announcement. *Insider Holdings/Outsider Holdings* is the percentage of shares owned by insiders (including affiliated blocks) and percentage of shares held by independent outside directors, respectively. *Block/Prior* (Bidder Toehold) is the percentage of shares owned by unaffiliated block holders, and the percentage of shares held by the bidding firm prior to making a takeover offer, respectively.

Consistent with Jennings and Mazzeo (1993), the table shows that cash is more likely to be offered as payment in bypass offers (81.2%) as compared to negotiated offers (61.2%). The null hypothesis that the difference in cash offers (*Cash*) between bypass and negotiated offers is zero is rejected at the 1% significance level. The success rate does not vary between these offer types.

Panel B of Table 1 summarizes board characteristics. On average, targets of a bypass offer have approximately 10 directors and targets of negotiated offers have approximately 9 directors (*Board Size*). The difference is statistically significant at the 1% level. Across offer types we find no significant differences in staggered board terms (*Staggered*), the presence of a poison pill (*Poison*), or insider board (*Insiders*) representation. There are significantly more outside directors (*Outsiders*) (52.2%) for bypass offers compared to negotiated offers (46.9%). Thus we can classify 51.5% of bypass firms as having an independent board (*Independent*), compared to only 39.9% for negotiated offer firms. The difference is statistically significant at the 5% level. Among the sample targets that receive a bypass offer, 78.8% have one person serving as both chair and CEO (*Chair/CEO*), compared with only 66.1% of the target firms that receive a negotiated offer. The difference is statistically significant at the 1% level.

Panel C of Table 1 reports several measures of shareholder wealth gains. The *Offer Premium* is 30.5% (median value 25.0%) for bypass offers and 34.1% (median value 27.0%) for negotiated offers. The null hypothesis that the difference in *Offer Premiums* between bypass and negotiated offers is zero cannot be rejected at conventional significance levels. The *Runup* return for bypass offers is 16.4%, compared to 8.8% for negotiated offers. The *Markup* return for bypass offers, 21.3%, is also higher than that for negotiated offers, 13.0%. The net effect is that the total premium (we measure *Premium* as *Runup* plus *Markup*) is 37.7% for bypass offers and only 21.9% for negotiated offers. We reject the null hypotheses that the differences in *Runup*, *Markup*, and *Premium* between bypass and negotiated offers are zero at the 1% significance level.

Panel D of Table 1 examines target firm characteristics. At 6.1%, sales growth (*Growth*) is lower, on average, for the targets of a bypass offer than for the targets of negotiated offers, 11.9%. The null hypothesis that the difference in mean sales growth rates between bypass and negotiated offers is zero is rejected at the 5% significance level. Panel D also examines other firm characteristics, such as *Market Value of Equity*, *Total Assets*, *Leverage*, and *CAPE*. The null hypothesis that the difference in each of these firm characteristics between bypass and negotiated offers is zero cannot be rejected at traditional significance levels.

Panel E of Table 1 reports target firm ownership structure. On average, insiders own (*Insider Holdings*) only 9.4% of targets of bypass offers,

compared to 14.8% of firms that receive negotiated offers. The null hypothesis that the difference in mean insider ownership (*Insider Holdings*) between bypass and negotiated offers is zero is rejected at the 1% significance level. The panel also examines other ownership characteristics such as *Outsider Holdings*, *Block*, and bidder toehold (*Prior*). The null hypothesis that the difference in each of these ownership characteristics between bypass and negotiated offers is zero cannot be rejected at traditional significance levels.

In summary, on average, target firms that receive bypass offers have lower sales growth, lower insider ownership, larger boards of directors, a higher percentage of independent outsiders on the board, and are more likely to have one person hold both titles, CEO and board chair. Target shareholder gains as measured by *Markup* and *Runup* returns are higher for firms receiving bypass offers.

3. The Initial Takeover Offer and the Initial Premium

In constructing the initial offer, the bidder must consider both the form of the offer and the offer premium. Any terms of the offer can also be designed to thwart competing offers.

3.1 Analysis of the initial takeover offer

We estimate the following logistic regression, which models the observed form of the initial offer type:

$$\begin{aligned} Bypass = & \beta_1 Board\ Size + \beta_2 Chair/CEO + \beta_3 Independent + \beta_4 Staggered \\ & + \beta_5 Poison + \beta_6 InsiderHoldings + \beta_7 Block + \beta_8 Prior + \beta_9 Gold \\ & + \beta_{10} Leverage + \beta_{11} Size + \beta_{12} Growth + \beta_{13} CAPE + \varepsilon_1. \end{aligned} \quad (1)$$

In Equation (1), *Bypass* is a binary variable that takes the value of one if the offer is a non-negotiated offer and zero otherwise. The independent variables in the regression include our proxies for board effectiveness, *Board Size*, *Chair/CEO*, and *Independent*. The independent variables also include control variables for ownership structure (*Insider Holdings*, *Block*, and *Prior*), managerial wealth (*Gold*), firm characteristics (*Leverage*, *Size*, *Growth*, and *CAPE*), and takeover defenses (*Staggered* and *Poison*). All independent variables are as defined in Section 2. Our principal concern in the analysis is the coefficient estimates on the proxies for board effectiveness.

Panel A of Table 2 presents the results of estimating Model (1).¹³ Conditional on receiving an offer, it is more likely to be a bypass offer

¹³ We note that in the following analysis, offer type (bypass or not) and the initial bid premium can be jointly determined. We use a simultaneous equation approach to explain the bypass decision and the bid

Table 2
Results of cross-sectional analysis of the observed initial terms of 436 takeover offers

	Constant	Board Size	Chair/ CEO	Independent	Indep* Chair/CEO	Staggered	Poison	Insider holdings	Block	Prior	Gold	Leverage	Size	Growth	CAPE
Panel A: Initial takeover offer															
Bypass offer	-1.510*	0.082*	0.578*	0.188		0.097	-0.220	-1.560*	-0.170	-0.007	0.256	-1.600*	0.047	-0.220*	0.036
Model (1)	(0.011)	(0.032)	(0.018)	(0.408)		(0.440)	(0.480)	(0.043)	(0.855)	(0.351)	(0.275)	(0.028)	(0.478)	(0.020)	(0.803)
Pseudo- $R^2 = 0.067$															
Bypass offer	-1.427*	0.081*	0.476*		0.231	0.097	-0.232	-1.579*	-0.188	-0.007	0.265	-1.591*	0.049	-1.231*	0.036
Model (1a)	(0.015)	(0.035)	(0.078)		(0.374)	(0.440)	(0.459)	(0.038)	(0.840)	(0.354)	(0.259)	(0.030)	(0.470)	(0.019)	(0.800)
Pseudo- $R^2 = 0.061$															
Panel B: Initial offer premium															
Offer premium	0.442*	0.002	0.027	-0.101*		-0.036	-0.071	-0.221	0.528*	0.002	-0.041	0.243	-0.027*	0.072	0.005
Model (2)	(0.001)	(0.814)	(0.590)	(0.038)		(0.181)	(0.300)	(0.126)	(0.005)	(0.471)	(0.421)	(0.102)	(0.063)	(0.404)	(0.866)
Adj. $R^2 = 0.032$															
Offer premium	0.394*	0.003	0.093*		-0.159*	-0.036	-0.057	-0.231	0.540*	0.001	-0.044	0.229	-0.027*	0.074	0.005
Model (2a)	(0.001)	(0.701)	(0.091)		(0.005)	(0.178)	(0.404)	(0.104)	(0.004)	(0.443)	(0.385)	(0.121)	(0.060)	(0.392)	(0.868)
Adj. $R^2 = 0.040$															

The form of the takeover offer (Model (1)) is presented in panel A. The initial offer premium Model (2) is presented in panel B. Model (1) is estimated as a logistic regression and Model (2) is estimated as an OLS linear regression. *Bypass* is a binary variable with a value of one if the offer is without the consent of incumbent management. *Indep*Chair/CEO* is a binary variable equal to one if the board is independent and the same person holds the titles of CEO and board chairman. All other variables are defined in Table 1. *P*-values are in parentheses. *Indicates significant at the 90% or higher confidence level.

when the target firm has a large board (*Board Size*). This result is consistent with Jensen (1993), who views larger boards as easier for the CEO to control, and also with the empirical observations of Yermack (1996). In addition, if one of the costs of larger boards is slower decision making [Lipton and Lorsch (1992)], then it is not surprising that a bidder is more likely to make a bypass offer as the target's number of directors increases.

Firms where one person holds both positions of chair and CEO (*Chair/CEO*) are statistically more likely to receive a bypass offer. This result indicates a CEO who is in control of the board. In a related attribute, we do not find a significant relation between board independence (*Independent*) and the likelihood that the bidding firm does not negotiate with target management.

To investigate the nonsignificant relation between receiving a bypass offer and board independence, we replace *Independent* with an interaction term between *Independent* and *Chair/CEO* (*Indep*Chair/CEO*). Panel A of Table 2 presents the result of this analysis. We refer to it as Model (1a).

The coefficient on the interaction term is not statistically significant. Only three of the control variables have a significant relation with the offer type. The ownership of insiders (*Insider Holdings*) has a statistically significant negative relation to the likelihood of receiving a bypass offer, which is consistent with reducing the conflict between managers and shareholders. With greater share ownership, managerial gains from the offer will be larger and managerial resistance less likely.

The level of debt (*Leverage*) has a significant negative relation to the likelihood of receiving a bypass offer. This result supports recent models in which the threat of hostile takeover motivates managers to take on debt [Novaes and Zingales (1995) and Zweibel (1996)].

Consistent with Schwert (2000), the lower the growth in sales (*Growth*), the greater the likelihood that the firm receives a bypass offer. This negative relation is consistent with our conjecture that a bidder, anticipating resistance by poorly performing managers who believe they will be replaced, is less likely to negotiate with target management.

In summary, the empirical evidence indicates that a bidder is more likely to make a bypass offer to a target with a larger board and a combined leadership structure. These characteristics are consistent with a board that is aligned with management. In addition to the board characteristics, we also note that bidders are less likely to make a bypass offer in the presence

premium, and find results similar to those we report using the nonsimultaneous equation approach (results available on request). We cannot reject the null hypothesis that the explanatory variables are exogenous for either Model (1) or Model (2) based on the Hausman test for endogeneity. For all tests, we check for multicollinearity, discrimination, heteroskedasticity, and model misspecification. We also examine whether the results are driven by influential observations. We conduct the diagnostic tests outlined in Hamilton (1992). We also estimate the analysis using robust estimation.

of greater insider ownership, greater leverage positions, and greater sales growth.

3.2 Analysis of the offer premium

We use ordinary least squares (OLS) to estimate the model of the initial offer premium. We measure *Offer Premium* as the difference between the offer price and the actual stock price 20 trading days prior to the offer, divided by this same stock price. The explanatory variables we use to predict the offer premium are identical to those we use in predicting the initial offer type in Model (1). Panel B of Table 2 reports the results of this analysis:

$$\begin{aligned} \text{OfferPremium} = & \delta_1 \text{Board Size} + \delta_2 \text{Chair/CEO} + \delta_3 \text{Independent} \\ & + \delta_4 \text{Staggered} + \delta_5 \text{Poison} + \delta_6 \text{Insider Holdings} + \delta_7 \text{Block} \\ & + \delta_8 \text{Prior} + \delta_9 \text{Gold} + \delta_{10} \text{Leverage} + \delta_{11} \text{Size} + \delta_{12} \text{Growth} \\ & + \delta_{13} \text{CAPE} + \varepsilon_2. \end{aligned} \quad (2)$$

We find a statistically significant negative relation between the offer premium and the binary variable *Independent* in Model (2). A board that is perceived as being aligned with shareholders rather than management is less likely to receive a higher premium. Unlike firms that receive a bypass offer (Models (1) and (1a)), there is no apparent statistical relation between the offer premium and one person holding both the titles of CEO and board chair (*Chair/CEO*).

To investigate the nonsignificant relation between the offer premium and *Chair/CEO*, we again replace *Independent* with an interaction term between *Independent* and *Chair/CEO* (*Indep*Chair/CEO*). In Model (2a), there is a significant positive relation between the premium and a target with a combined leadership structure (*Chair/CEO*). However, when the target has both a combined leadership structure and an independent board (*Indep*Chair/CEO*), on average, the premium is lower, all else being equal. This result supports the argument of Hirshleifer and Thakor (1994) that a higher premium is necessary to induce entrenched management to accept a takeover offer and is consistent with the non-linear aspect of the bid premium.

We also test Model (1) and Model (2) using both *Independent* and *Indep*Chair/CEO*. The Model (1) results are unaffected. The interaction term remains statistically significant in Model (2), but *Independent* does not. We also replace *Independent* with the percent of insiders on the board and the square of this measure. We use the square of this measure to consider the possible non-linearity of board composition. Neither measure is statistically significant in either model or in any of the results reported in this article.

Table 3
The results of a logistic regression analysis of the presence of a competing bid on the observed initial terms of 436 takeover offers

	Constant	Bypass γ_1	Offer premium γ_2	Prior γ_3	Cash γ_4	Resist γ_5	Pseudo- R^2
Compete Model (3)	-1.398* (0.001)	1.122* (0.001)	-0.345 (0.360)	-0.042* (0.015)	-0.040 (0.880)		0.067
Model (3a)	-1.702* (0.001)	0.791* (0.001)	-0.191 (0.599)	-0.057* (0.009)	-0.037 (0.894)	1.291* (0.001)	0.068

Our logit model estimates the likelihood that a target receives multiple bids. *Resist* is a binary variable that equals one when the target firm resists the initial offer and zero otherwise. *P*-values are in parentheses. *Indicates significant at the 90% or higher confidence level.

We observe that the control variables are not significantly related to the offer premium except for the presence of large unaffiliated block holders and target firm size. The greater the percentage of the target’s shares held by unaffiliated block holders (*Block*), the larger the bid premium. At first glance, this result appears inconsistent with Hirshleifer and Thakor because monitoring by block holders should mitigate the conflict between managers and shareholders. However, unaffiliated block holders are effective monitors of management because they present a credible takeover threat [Shliefer and Vishny (1986)]. Thus a bidder offers a larger premium to discourage the block holders from extending a competing bid. Similar to Schwert (2000), we observe that the offer premium is negatively related to target firm size (*Size*).¹⁴

In summary, the evidence indicates that all else being equal, targets receive a lower initial premium when the target’s board is independent and when the target’s board is both independent and has a combined leadership structure. This result is consistent with the bid premium being used to induce entrenched management to accept a takeover offer.

3.3 The preemptive nature of an offer

A remaining issue we consider is if the takeover offer was structured to discourage competitors from entering the control contest.

We estimate the following logistic regression, which models the presence of a competing bid. Table 3 presents the results.

$$Compete = \gamma_1 Bypass + \gamma_2 Offer\ Premium + \gamma_3 Prior + \gamma_4 Cash + \varepsilon_3. \quad (3)$$

In Equation (3), *Bypass*, *Cash*, *Offer Premium*, and *Prior* are as previously defined. *Compete* is a binary variable that takes the value of one if the

¹⁴ Schwert (1996) finds significant runup in the stock price of the target prior to the offer. However, he concludes that they are uncorrelated with premiums. We do include runup in the stock price (measured over days (-42, -1) relative to the first bid) in the analysis, but it is not significantly related to either the offer choice or the bid premium. We also include a measure of target firm liquidity defined in the same way as in Schwert (2000), but this measure is also not significantly related to either the offer choice or the bid premium. In addition to the firm-specific growth measure, we introduce an industry growth measure. Industry growth is not statistically significant. These results are available from the authors on request.

target firm receives a competing bid. We define *Compete* as any competing offer other than the original bid that was formally received by the target. Similar to the initial bidder, a competing bid must be an offer to obtain a controlling majority interest in the target firm by an entity that is currently not a majority shareholder of the target. Of the 436 observations, 24% receive a competing offer. Of this number, only 33 firms receive more than one offer from another bidder. A target firm with multiple bidders only shows up once in our analysis, paired with the first bidder. We repeat our analysis excluding multiple bidder firms with no change in the results.

Similar to Schwert (2000) and Jennings and Mazzeo (1993), we find that the *Offer Premium* and the medium of exchange (*Cash*) do not influence a competing bid. Consistent with Betton and Eckbo (2000), we also find that the initial bidder's toehold (*Prior*) has a significant negative effect on influencing a competing bid.

A competing bid is more likely if the initial offer is a bypass offer (*Bypass*). This result is consistent with the initial offer putting the target "in play."

Alternatively, the target firm might resist the offer in an attempt to encourage a competing bid. To evaluate this aspect, we modify Model (3) to examine whether the target firm resists the bypass offer. We refer to this modification as Model (3a).

We define target resistance as any act by target management that might indicate dissatisfaction with the offer. This definition includes the following: (1) Target management states that it does not support the proposed acquisition. (2) Target management takes any of the following actions: (a) initiates legal actions, (b) seeks a white knight or white squire, (c) revises or amends the charter of incorporation, (d) undertakes a financial restructuring (issues or redeems financial claims), and/or (e) undertakes a real restructuring. (We include in these categories, actions that are initiated by preexisting "antitakeover" amendments to the charter. For example, triggering a poison pill would be classified as a financial restructuring.) (3) Target management initiates or actively participates in the cancellation of the acquisition proposal.

In Model (3a), *Resist* is a binary variable that equals one when the target resists the initial offer and zero otherwise. If the target resists the initial offer, it is statistically more likely that a competing bid results and the effect of a bypass offer declines.

4. Other Takeover Offer Characteristics

4.1 The success of the initial offer

We anticipate that the design of the offer is intended to ensure a successful acquisition. To gauge the relation between takeover offer success and

target board characteristics, we estimate a logistic regression that models the probability that the initial takeover offer succeeds. The dependent variable is a binary variable that equals one when the initial bid leads to an acquisition of a target firm and zero otherwise (*Success*). We include variables that we view as exogenous to the entire process (e.g., target board characteristics) and those that are endogenous but determined prior to the outcome [e.g., offer type (*Bypass*) and offer premium (*Offer Premium*)]. We also include control variables that can influence the success of the offer regardless of target board characteristics. These variables include *Resist*, *Compete*, and a binary variable (*Revise*) that equals one if the target receives a revised offer and zero otherwise.

Table 4 reports our estimation results. In Model (4) we examine the relation between the offer outcome and the characteristics of the takeover process. Actions by the boards of directors that resist the initial offer (*Resist*) and the presence of competing offers (*Compete*) reduce the likelihood of a successful outcome. The offer is more likely to succeed if the bidder revises the initial offer premium (*Revise*). The higher the initial premium, the more likely it is that the initial bidder will successfully acquire the target. The positive relation between the observed offer premium (*Offer Premium*) and the success of the offer is consistent with Hirshleifer and Titman (1990).

A bypass offer (*Bypass*) is more likely to be successful. Since many negotiations that fail are never revealed and bypass offers are public by definition, identifying failed offers from the press undoubtedly misses more failed negotiated offers than failed bypass offers. This biases the success percentage upward for the negotiated offers, because the failed negotiations are undercounted. As a result, when modeling offer success, the coefficient on the bypass binary variable is biased downward. So making a bypass offer is even more successful than reported in Table 4 (and Table 1).

In Models (4a) and (4b) we replace *Bypass* with board characteristics that may influence the success of the initial offer. The explanatory variables are the same variables used to predict offer type and offer premium in Table 2. In addition to the characteristics of the takeover process that have the same influence as in Model (4), the offer is more likely to succeed if one person holds both the titles of CEO and board chair (*Chair/CEO*). We also see that an independent board (*Independent*) in Model (4a) and (*Indep*Chair/CEO*) in Model (4b) has a negative influence on the success of the offer. This result is similar to the finding of Brickley, Coles, and Terry (1994) that a positive (but insignificant) relation exists between the failure of a takeover bid and the proportion of outsiders on the board. One interpretation of this result is that an independent board, acting in shareholder interests, believes the offer is inadequate and that a better offer is forthcoming. However, this relation exists even when we control

Table 4**Results of a logistic regression analysis of the success of a takeover offer for a sample of 436 initial bids between June 1979 and December 1990**

	Model (4)	Model (4a)	Model (4b)	Model (4c)	Model (4d)
Constant	0.950* (0.000)	1.111 (0.127)	0.908 (0.204)	0.979 (0.187)	0.752 (0.303)
<i>Resist</i>	-3.121* (0.000)	-2.503* (0.000)	-2.486* (0.000)	-3.013* (0.000)	-2.979* (0.000)
<i>Compete</i>	-1.467* (0.000)	-1.146* (0.000)	-1.162* (0.000)	-1.358* (0.000)	-1.374* (0.000)
<i>Revise</i>	1.470* (0.000)	1.695* (0.000)	1.714* (0.000)	1.561* (0.000)	-1.569* (0.000)
<i>Offer Premium</i>	0.964* (0.017)	1.321* (0.004)	1.283* (0.006)	1.202* (0.012)	1.166* (0.015)
<i>Bypass</i>	1.318* (0.000)			1.507* (0.000)	1.492* (0.000)
<i>Board Size</i>		0.001 (0.991)	-0.001 (0.990)	-0.012 (0.794)	-0.013 (0.787)
<i>Independent</i>		-0.520* (0.057)		-0.585* (0.037)	
<i>Indep* Chair/CEO</i>			-0.458* (0.100)		-0.413* (0.095)
<i>Chair/CEO</i>		0.438* (0.052)	0.623* (0.052)	0.359* (0.098)	0.561* (0.089)
<i>Insider Holdings</i>		0.703 (0.445)	0.941 (0.297)	0.963 (0.308)	1.205 (0.197)
<i>Block</i>		-0.258 (0.829)	-0.197 (0.869)	-0.020 (0.987)	0.060 (0.962)
<i>Prior</i>		0.015 (0.231)	0.015 (0.241)	0.015 (0.213)	0.015 (0.231)
<i>Gold</i>		0.013 (0.965)	-0.010 (0.972)	-0.070 (0.813)	-0.098 (0.737)
<i>Leverage</i>		0.867 (0.329)	0.811 (0.361)	1.397 (0.137)	1.344 (0.152)
<i>Size</i>		-0.097 (0.239)	-0.100 (0.225)	-0.114 (0.185)	-0.116 (0.172)
<i>Growth</i>		-0.041 (0.936)	-0.032 (0.950)	0.324 (0.577)	0.335 (0.565)
<i>CAPE</i>		-0.037 (0.831)	-0.043 (0.807)	-0.045 (0.803)	-0.053 (0.772)
<i>Staggered</i>		0.134 (0.609)	0.140 (0.590)	0.117 (0.665)	0.124 (0.646)
Pseudo- R^2	0.260	0.241	0.239	0.285	0.282

Our logit model estimates the likelihood that an initial takeover offer will be successful. The dependent variable is a binary variable that equals one when an initial bid leads to the acquisition of a target firm and zero otherwise. *Revise* is a binary variable that equals one when the terms of the initial takeover offer are revised and zero otherwise. *P*-values are in parentheses. *Indicates significant at the 90% or higher confidence level.

for a revision in the initial offer. Hence the results support Harford's (2003) argument that due to the possible loss of a lucrative board seat, outside directors have incentives to see that the takeover is not completed.

Models (4c) and (4d) include the offer type, board characteristics, and target firm characteristics. The results for board characteristics still hold. The offer is less likely to succeed if the target has an independent board (*Independent*), but more likely to succeed if one person serves as CEO and board chair (*Chair/CEO*).

After controlling for these characteristics, the likelihood that the offer succeeds is higher for a bypass offer (*Bypass*). This result suggests that there are factors in addition to the board and target firm characteristics used in this study that lead the bidder to choose a bypass offer and that lead to bypass offers having higher success rates.

We control for ownership structure, managerial wealth, firm characteristics, and takeover defenses. None of these variables shows a significant relation with the success of the initial offer.

4.2 Target shareholder wealth gains

Although our primary focus is on the bidder's choices of offer parameters, we also consider the overall wealth implications of the target firm's shareholders. The target firm's shareholders should prefer the offer type that generates the largest wealth gains. We evaluate the impact of target board characteristics on target shareholder wealth. We estimate regressions with the target shareholder gains (i.e., the cumulative market-adjusted abnormal return to the target firm's stock for trading days (−42, 126) relative to the date of the first bid) as the independent variable. Hence we note that we measure shareholder gains beyond those due solely to the initial offer premium.

Table 5 reports the results of an OLS analysis of target shareholder gains. Model (5) indicates that total gains are higher if there are multiple bidders (*Compete*), the initial offer is revised (*Revise*), and the offer is a bypass offer (*Bypass*). Resisting the offer (*Resist*) has a negative influence on target shareholder gains. This finding is consistent with the results in Table 4 that show that resistance reduces the probability of success. An unsuccessful offer would result in the loss of the market-based target shareholder gains.

Models (5a) and (5b) examine the relation between board characteristics and target shareholder wealth gains. In these models we use the binary variable *Success* as an instrumental variable for the takeover process characteristics. Not surprisingly, gains are higher if the initial offer is successful.

Total shareholder gains are higher, on average, for target firms with a large board (*Board Size*) and a combined leadership structure (*Chair/CEO*). Two explanations may account for the positive relation between leadership structure and total shareholder's gains. First, consolidating authority in a single manager's hands extracts a higher market-based premium. Second, we might be observing the market's positive reaction, not to a larger board and combined leadership structure, but to the presence of a bypass offer. The empirical evidence from Model (1) of Table 2 suggests that bidders are less likely to negotiate with existing management in the presence of a large board and a combined leadership structure.

Table 5**Results of an OLS regression analyzing the shareholder wealth gains for a sample of 436 initial bids between June 1979 and December 1990**

	Model (5)	Model (5a)	Model (5b)	Model (5c)	Model (5d)
Constant	0.218* (0.000)	0.091 (0.355)	0.104 (0.288)	0.201* (0.055)	0.199* (0.055)
<i>Resist</i>	-0.116* (0.007)				
<i>Compete</i>	0.084* (0.038)				
<i>Revise</i>	0.061* (0.100)				
<i>Bypass</i>	0.156* (0.000)			0.139* (0.000)	0.139* (0.000)
<i>Success</i>		0.191* (0.000)	0.188* (0.000)	0.153* (0.000)	0.152* (0.000)
<i>Board Size</i>		0.011* (0.082)	0.011* (0.077)	0.007 (0.301)	0.007 (0.284)
<i>Independent</i>		0.026 (0.486)		-0.002 (0.966)	
<i>Indep* Chair/CEO</i>			0.007 (0.601)		-0.017 (0.714)
<i>Chair/CEO</i>		0.043* (0.098)	0.043* (0.064)	0.011* (0.091)	0.018* (0.099)
<i>Insider Holdings</i>		-0.107 (0.154)	-0.125 (0.254)	-0.136 (0.251)	-0.145 (0.213)
<i>Block</i>		-0.066 (0.655)	-0.067 (0.652)	-0.080 (0.607)	-0.079 (0.611)
<i>Prior</i>		-0.006* (0.041)	-0.007* (0.047)	-0.002* (0.071)	-0.002* (0.074)
<i>Gold</i>		-0.016 (0.702)	-0.012 (0.759)	0.002 (0.962)	0.003 (0.939)
<i>Leverage</i>		-0.107 (0.351)	-0.112 (0.329)	-0.046 (0.707)	-0.049 (0.690)
<i>Size</i>		-0.008* (0.100)	-0.008* (0.099)	-0.021* (0.071)	-0.021* (0.073)
<i>Growth</i>		0.033 (0.613)	0.031 (0.636)	0.040 (0.572)	0.040 (0.571)
<i>CAPE</i>		-0.092* (0.000)	-0.091* (0.000)	-0.116* (0.000)	-0.116* (0.000)
<i>Staggered</i>		0.015 (0.677)	0.014 (0.703)	0.009 (0.804)	0.009 (0.811)
Adj. R^2	0.083	0.073	0.078	0.113	0.114

We use a regression model to explain the shareholder wealth gains (the cumulative abnormal return to the target firm's stock for trading days (-42, 126) relative to the date of the first bid) for successful and unsuccessful initial takeover bids. *P*-values are in parentheses. *Indicates significant at the 90% or higher confidence level.

The literature suggests that independent outside directors enhance target shareholder gains.¹⁵ Model (5a) does not support a relation between shareholder gains and board independence (*Independent*). Model (5b) reconsiders the relation between shareholder gains and

¹⁵ Cotter, Shivdasani, and Zenner (1997) study a sample of 229 tender offers during the period 1989–1992. Among their findings are (1) targets with independent boards experience significantly higher shareholder gains than do other targets; (2) target returns are higher in resisted offers when the board is independent; and (3) gains are higher when the target has both a poison pill in place and an independent board. There are several possible sources for the different results. These include (1) Cotter, Shivdasani, and Zenner study a different, shorter time period; (2) they measure shareholder wealth gains over a shorter period of time; and (3) their sample consists only of tender offers. If we repeat our analysis for the subsample of bypass offers,

board independence by replacing board independence (*Independent*) with an interaction term (*Indep*Chair/CEO*). This analysis does not support a relation between shareholder gains and board independence. Combined with the negative relation between board independence and offer success, this result lends additional support to Harford's (2003) argument that outside directors have incentives that deviate from those of the shareholders they represent.

Models (5c) and (5d) examine the relation between offer type and shareholder wealth gains when we control for known target board and firm characteristics. After controlling for these characteristics, we find that shareholder wealth gains are significantly higher (14%) for a bypass offer (*Bypass*). There is no longer a statistically significant relation between a larger board (*Board Size*) and shareholder gains. This result suggests that the more positive target returns are due to the offer type. However, it is still the case that a combined leadership structure (*Chair/CEO*) generates higher abnormal returns for target shareholders.

Across the models in Table 5, only three control variables are significantly related to shareholder wealth gains. Consistent with the findings of Cotter, Shivdasani, and Zenner (1997) and Betton and Eckbo (2000), all of the models show that total gains decrease as the bidder's toehold (*Prior*) increases. Consistent with Schwert (2000), total shareholder gains are also negatively related to target firm size (*Size*). Finally, similar to Schwert (2000), the performance variables are not reliably related to shareholder gains. On average, gains are lower if the target stock's abnormal performance (*CAPE*) has been high, but gains are not significantly related to sales growth (*Growth*).

5. Conclusion

We investigate the empirical determinants of two alternative forms of takeover offers, negotiated and bypass. The evidence suggests that the characteristics of the target's board of directors influence the choice of takeover offer.

A bypass offer is more likely when the CEO of the target also chairs the board, perhaps because the bidder perceives management with a combined leadership structure as entrenched.

Firms with larger boards are more likely to receive a bypass offer. A larger board of directors may not function effectively, leaving management relatively free to make decisions with less board oversight.

Board composition also affects returns to the target firm's shareholders. We find that the initial offer premium is lower if outside directors represent a majority of the board. Total target shareholder gains are

the parameter estimates are consistent with their results for both the poison pill and resistance combined with an independent board, but none of the parameter estimates are significantly different than zero.

larger when one person holds both the positions of CEO and board chair. Shareholder gains are not significantly related to board independence.

In contrast to prior research, these results do not indicate that boards dominated by outsiders increase value for their shareholders during an acquisition attempt. Rather it is managers with the consolidated authority of CEO and board chair who extract higher gains for their shareholders.

We also examine the success of the initial offer. We find that offers made to targets with independent boards are less likely to be successful, even when the initial offer has been revised. This result suggests that outside directors have incentives to see that a takeover is not completed, perhaps to protect their positions on the board.

In interpreting these results, we note the following caveat: Although this study provides results consistent with target board characteristics that influence when a bidder chooses to proceed with a non-negotiated offer, the results may also indicate a target management that is likely to resist initial overtures from the bidder. We cannot know for sure which is a better representation of our results, given that target management resists a high proportion of non-negotiated offers. Also, we make no claim that we analyze all the relevant determinants in the choice of a takeover offer. Our results suggest that target firm characteristics, including board characteristics, do affect the offer type.

There is also a relation between target board characteristics and the likelihood of the success of the offer and target shareholder wealth gains. Moreover, when we control for these firm characteristics, we find that a bypass offer is more likely to be successful and that shareholder wealth gains are significantly higher for a bypass offer.

It appears that there has been a substantial decline in the number of unsolicited tender offers beginning with the 1990s [Schwert (2000)]. For purposes of interpreting our findings, it would help to know why this shift occurred. One explanation for this decline is the prevalence of various antitakeover devices, such as poison pills and state antitakeover laws, implemented in the late 1980s. At the same time, other corporate governance mechanisms began to play a larger role. These include a significant increase in equity-based compensation for top management and directors [Hall and Liebman (1998, 2000), Perry (2000)], increased equity ownership by large institutional investors [Gompers and Metrick (2001)], and a shift toward corporate boards with a majority of outside directors [Bhagat and Black (1997)]. As a result of these changes, the takeover environment appears to favor negotiated offers over non-negotiated offers. Nevertheless, we can reasonably expect that both non-negotiated and negotiated offers will continue to exist. Thus it remains important to understand the choice of takeover method and to investigate the target firm characteristics that might influence the form of a control contest.

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