Board Structure, Type of Antitakeover Provision, and Stock Price Effects

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ABSTRACT

This paper examines the relationship between the passage of six types of corporate charter antitakeover provisions (supermajority, classified boards, fair-price, reduction in cumulative voting, anti-greenmail and poison pills) and stockholder wealth. Our event study from a sample of 379 firms that adopted 483 antitakeover provisions in the 1984-1988 period indicates a strongly negative effect on stockholder wealth in support of the managerial entrenchment hypothesis that antitakeover provisions are adopted by managers at the expense of stockholders. In addition, we find (in contrast to Walsh & Sewards' (1990) prediction) that the market reacts equally negatively to both non-operating provisions that require stockholder approval and to operating provisions that do not require stockholder approval. Finally, we find that market reactions to antitakeover provisions vary depending on firms' board structure.

The takeover wave of the 1980s had a profound impact on the structure of corporate America (Shleifer & Vishny, 1991). Managers adopted antitakeover provisions as an adaptive response to this merger wave. Considerable controversy at the federal, state, and individual firm level surrounds the use of these antitakeover provisions, because they can curb the monitoring influence of the market for corporate control and thus can adversely affect stockholder interests (Pound, 1992).

Researchers have empirically examined the impact of takeover defenses on stockholder wealth by examining market reaction to these defenses (described below). These researchers have also considered the moderating impact of stock ownership structure.

However, the impact of corporate boards on market reactions to takeover defenses has not been considered. Stock market reactions to takeover defenses can vary on the basis of the market's perception of the corporate board's ability to protect stockholder interests in the event of a takeover bid.

In addition, while there is some consensus in the governance literature about the overall negative effect of antitakeover provisions (e.g., Kesner & Dalton, 1985; Kosnik, 1990; Mahoney & Mahoney, 1993), researchers tend to diverge in their premise of whether antitakeover provisions have differential impacts on stockholder wealth. For example, some governance researchers describe all antitakeover provisions as equally detrimental to stockholder wealth (Kesner & Dalton, 1985; Rechner, Sundaramurthy & Dalton, 1993). On the other hand, Walsh & Seward (1990) make a theoretical case that some antitakeover provisions are more detrimental to stockholders than others.

The purpose of this study is threefold. First, the study examines the stockholder wealth effects of the adoption of supermajority, classified board, fair-price, reduction in cumulative voting, anti-greenmail and poison pill provisions (Table 1). We test the wealth effects of these amendments using a sample from the Investor Responsibility Research Center (IRRC) data base (Rosenbaum, 1987, 1989) rather than the commonly studied Securities and Exchange Commission (1985) sample.

Second, this study provides the first test of the divergent views concerning the differential wealth effects of antitakeover provisions. Finally, and perhaps most significantly, this paper considers the impact of board structure on market reactions to antitakeover provisions, after controlling for the effects of stock ownership.

Insert Table 1 about here

THEORETICAL PERSPECTIVES OF STOCKHOLDER WEALTH EFFECTS OF ANTITAKE-OVER PROVISIONS

Two competing theoretical perspectives drive the research addressing stockholder wealth effects of the adoption of antitakeover provisions. One view is that antitakeover provisions benefit stockholders and is known in the literature as the "stockholder interests hypothesis" (Linn & McConnell, 1983; Grossman & Hart, 1980). A competing viewpoint known as the "management entrenchment hypothesis" is that antitakeover provisions are not in stockholders' best interests (DeAngelo & Rice, 1983; Jarrell & Poulsen, 1987).

Stockholder Interests Hypothesis. According to the stockholder interests hypothesis, the market would react positively to adoption of antitakeover provisions for two reasons. First, the adoption of antitakeover provisions effectively creates a long-term contract with the current management team and may encourage them to make firm-specific capital investments and long-term investments which are in the long-run best interest of stockholders (Baysinger & Butler, 1985a)[1]. Second, antitakeover provisions provide corporate management additional veto power in takeover situations and enable them to negotiate better deals on average for their stockholders (DeAngelo & Rice, 1983). Linn and McConnell (1983) provide empirical support for the stockholder interests hypothesis.

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Management Entrenchment Hypothesis. According to the management entrenchment view, antitakeover provisions protect inefficient incumbent management that may indulge in shirking, and maintaining short time horizons, each of which results in a present-value loss for the firm (Jensen & Meckling, 1976). Those who subscribe to the "management entrenchment" view argue that all of the "institutions of capitalism" (Williamson, 1985) are mechanisms which mitigate, but do not eliminate managerial discretion. Supporters of the managerial entrenchment view also contend that antitakeover provisions reduce the probability of a firm receiving valuable takeover offers from alternative management teams (Pound, 1985), exacerbating the agency problem of the separation of ownership and control (Berle & Means, 1932). Pound (1987) finds that firms receive takeover bids significantly less frequently subsequent to the adoption of antitakeover provisions. Thus, antitakeover provisions are viewed as reducing the effectiveness of the market for corporate control and hence, a negative relationship between the adoption of antitakeover provisions and stockholder returns is expected.

MARKET REACTIONS TO ANTITAKEOVER PROVISIONS

Studies testing the stockholder interests and management entrenchment hypotheses examine market reactions to the adoption of antitakeover provisions. These studies, summarized in Table 2, generally rely on the SEC (1985) sample and find support for the management entrenchment hypothesis.

Insert Table 2 about here

In addition, Mahoney and Mahoney (1993) demonstrate that amendments adopted in the early 1970s have minimal positive stock price impacts, and those adopted in the 1980s, during the takeover boom, have significantly negative stock price impacts. Some explanations for the negative trend over time in the effect of antitakeover amendments include:

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(1) <u>Changes in the composition of stockholders</u> (i.e., an increase in control by institutional investors (Chaganti & Damanpour, 1991; Graves, 1988; Graves & Waddock, 1990; Hill & Hansen, 1989));

(2) <u>Learning over time by stockholders</u>[2] (i.e., stockholders may update their expectations of the effects of an antitakeover amendment after seeing the effects on firms which have already passed them. With several years of experience on antitakeover amendments the unbiased estimate in the mid-1980s may be a lot more accurate than the unbiased estimate in the 1970s.);

(3) <u>Changes in the structure of the takeover market</u> (e.g., a more competitive takeover market would decrease the overall benefits of antitakeover amendments). Since the takeover market was more active in the 1980s than in the 1970s, it seems reasonable to argue that the market might react more negatively to antitakeover amendment proposals in the 1980s. Also, many state antitakeover laws were invalidated in 1982, and antitrust impediments were reduced; and

(4) <u>Changes in the types of management which propose antitakeover amendments</u> (e.g., perhaps early antitakeover amendments were proposed by responsible managers who acted in the best interests of stockholders but more recent amendments have been proposed by self-interested managers who propose the amendments despite the negative stock price effect).

Since our sample in this paper covers the 1984-1988 period, we expect to find negative market

reactions to various antitakeover provisions.

Hypothesis 1
> **The market is likely to react negatively to the adoption of each and every antitakeover provision.**

DIFFERENCES AMONG ANTITAKEOVER PROVISIONS AND MARKET REACTIONS

Walsh and Seward (1990) subscribe to the entrenchment view, but differentiate among

takeover defense actions. They provide a useful theoretic framework to classify different managerial

takeover defenses, and we use their taxonomy to classify our six antitakeover provisions. Walsh and

Seward (1990) use two dimensions to classify antitakeover actions of firms. They distinguish between

operating and non-operating measures, and between measures that require stockholder approval and

those that do not. Using these two dimensions, Walsh and Seward (1990) classify firms' takeover

defenses into a two-by-two matrix (Table 3).

Insert Table 3 about here

Operating measures result in changes in a firm's assets, financial structure or both. For example, managers of a firm may repurchase a large block of shares from a bidder to prevent the firm from being taken over (i.e., managers pay greenmail). This purchase will be reflected in the company's balance sheet and is classified as an operating measure. Non-operating measures do not involve a change in a firm's balance sheet but nonetheless are believed to affect adversely the probability of a successful takeover effort. For example, firms can change their charters to restrict the voting rights of stockholders. These charter changes are viewed as non-operating measures as they do not affect the balance sheet. Walsh and Seward contend that: "shareholders are usually harmed more by operating than by non-operating defensive measures. Perhaps this is due to the latter's being likely to be less costly to reverse if circumstances warrant" (1990: 439).

Another dimension on which Walsh and Seward (1990) categorize takeover defense measures is whether or not a measure requires stockholder approval. For instance, payment of greenmail does not require stockholder approval, whereas restriction of stockholder voting rights requires stockholder approval. Walsh and Seward indicate that: "Theoretically actions taken by management that do not require stockholder approval may be particularly damaging to shareholder interests [when compared to actions that require shareholder approval]" (1990: 438). Their conjecture is intuitive given that agency problems (Eisenhardt, 1989; Oviatt, 1988) are likely to be higher when stockholders are not provided an opportunity to participate and curb actions that may be detrimental to them.

Walsh and Seward's (1990) framework implies that antitakeover provisions can be viewed as a continuum with one end representing the most harmful antitakeover provisions from the stockholders' viewpoint and the other end representing the least harmful antitakeover provisions. Actions in cell 2 of Table 3 are predicted to be the most harmful actions from an agency perspective, because operating measures and those that do not require stockholder approval entail higher agency costs than non-operating measures or measures that require stockholder approval. Cell 3 represents

least harmful actions from stockholders' viewpoint as they are non-operating measures and require stockholder approval. Cells 1 and 4 represent actions that fall between the two ends in their predicted effect on stockholder wealth, because they are either operating antitakeover provisions or do not require stockholder approval **but not both**.

The six antitakeover provisions considered in this study fall in cells 2 and 3, which represent actions that fall in two ends of the continuum described (see Table 3). We examine differences between actions in these two cells because if Walsh and Seward's (1990) dimensions are critical to the market, we should certainly expect differences in market reactions to actions that fall in two ends of the continuum. More specifically, one should expect the market to react more negatively to the adoption of actions in cell 2 (operating measures that do not require stockholder approval) than to actions in cell 3 (non-operating measures that require stockholder approval). The above discussion leads to the following hypothesis:

Hypothesis 2

The market is likely to react more negatively to the adoption of operating antitakeover provisions that do not require stockholder approval (poison pills) than to the adoption of non-operating antitakeover provisions that require stockholder approval (i.e., super-majority requirements, classified boards provisions, fair-price provisions, reduction in cumulative voting rights, or anti-greenmail provisions).

The second hypothesis is a test of Walsh and Seward's (1990) theoretical predictions. We note here that a falsification of hypothesis 2 does not necessarily demonstrate that Kesner and Dalton's (1985) argument that all amendments are equally detrimental to stockholders is correct. Another possibility is that stockholder wealth effects do differ among amendments but that such differences cannot be predicted simply on the basis of Walsh and Seward's (1990) suggested dimensions (i.e., operating versus non-operating and stockholder approval versus non-stockholder approval required).

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BOARD STRUCTURE AND MARKET REACTIONS TO ANTITAKEOVER PROVISIONS

Market reactions to the adoption of antitakeover provisions may depend on an important internal governance mechanism, the corporate board of directors. If stockholders perceive their corporate board as effective in protecting their interests, the market is likely to be less negative about the adoption of antitakeover provisions which curbs the influence of the external market for corporate control. On the other hand, if stockholders view their boards as a weak and passive mechanism, the market is prone to react more negatively to antitakeover provisions.

While corporate boards (should) exist to protect stockholder interests (Williamson, 1985), boards are often viewed as "rubber stamps" of management. In light of this view, corporate reformists have suggested several changes to boards to improve its governance function (Zahra & Pearce, 1989). Two important recommendations pertain to board composition and leadership.

Board composition involves the mix of insiders (those employed by the organization) and outsiders (Baysinger & Butler, 1985b; Baysinger & Hoskisson, 1990). Greater outsider representation is advocated since outsiders are likely to be more objective in monitoring management actions than inside directors (Baysinger, Kosnik & Turk, 1991; Fama & Jensen, 1983a, 1983b). For instance, Geneen remarks: "Certainly, none of the inside directors would substantially challenge his boss in the board room" (1984: 262). Even though the impact of increased outsider representation on the outcome of board actions is mixed (Cochran, Wood & Jones, 1985; Kosnik, 1987; Singh & Harianto, 1989a, 1989b), there is some evidence that outsiders are appointed to the board when a firm performs poorly (Hermalin & Weisbach, 1988), and the market reacts positively to the appointment of outside directors (Rosenstein & Wyatt, 1991). If the market reacts positively to the inclusion of outsiders, takeover defense actions taken by boards with a greater number of outsiders are likely to be viewed more favorably than those taken by boards with fewer outsiders. This discussion leads to the following hypothesis:

<u>Hypothesis 3</u>

> **The market is likely to react more negatively to antitakeover provisions adopted by boards with a lower proportion of outsiders on the board than to those adopted by boards with a greater proportion of outsiders.**

Another reform strongly advocated by governance activists is separation of the chair of the board and CEO positions (Mallette & Fowler, 1992; Rechner & Dalton, 1989, 1991; Vance, 1983). The logic of this recommendation rests on the notion that when the CEO and chair of the board are held by one individual, the board's ability to function as a governance mechanism is severely curbed. The chair of the board is responsible for setting the board agenda, scheduling regular and special stockholder meetings and **monitoring** board committees. These duties provide the chair with considerable power to monitor management actions. If the CEO is vested with this power, the board's governing capacity is almost certainly compromised.

While the impact of separation of powers on corporate performance is mixed (Berg & Smith, 1978; Chaganti, Mahajan & Sharma, 1985; Rechner & Dalton, 1989, 1991), there is some evidence that separation of the CEO and chairperson of the board facilitates the effectiveness of board functioning (Mallette & Fowler, 1992). Moreover, in the recent past, stockholders have pushed for a separation of CEO and chair positions in several under-performing companies, such as General Motors, as a means to restore the firm's credibility with investors. If the separation of powers can signal to stockholders the ability of the board to protect stockholders interests, one could argue that takeover defense actions taken by such a board may be viewed more favorably relative to takeover defense actions taken by boards with a CEO-chairperson. This logic leads to our fourth hypothesis:

<u>Hypothesis 4</u>

> **The market is likely to react more negatively to takeover defenses adopted by boards chaired by the CEO than to takeover defense actions adopted by boards not chaired by the CEO.**

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METHOD

The efficient capital market theory provides a framework for the empirical testing of our hypotheses (Barney, 1988; Bettis, 1983). Stockholder wealth effects of the adoption of antitakeover amendments are tested by considering the equity value impact at the time of the antitakeover amendment proposal.

Sample. Our sample of firms proposing antitakeover provisions is derived from the Investor Responsibility Research Center (Rosenbaum, 1987, 1989). This data base covers the 1,500 largest American corporations[3]. Our sample includes 379 firms adopting 483 antitakeover provisions for the 1984-1988 period (Rosenbaum, 1987, 1989; Sundaramurthy, 1992). Our sample begins in 1984 to mark the initial adoption of the poison pill. In fact, prior to the Delaware court decision in 1985 that upheld the legality of poison pill plans, there were only four such plans in the United States (Mallette & Fowler, 1992). The large sample of 483 provisions should reduce the level of statistical noise in measuring stock returns. In terms of individual amendments our sample includes 20 supermajority amendments, 104 classified board amendments, 110 fair-price amendments, 21 provisions for reduction in cumulative voting, 33 anti-greenmail provisions, and 195 poison pill defenses.

Event Date. The proxy statement mailing date is utilized as the best available estimate of the date of the first public announcement of antitakeover amendment consideration (Jarrell & Poulsen, 1987). Once the announcement is made, the uncertainty regarding stockholder approval is slight. Surveys indicate that over 95 percent of amendments proposed by the firm pass (McWilliams, 1990).

In addition, unlike many other corporate events, antitakeover proposals are rarely reported by the press (Agrawal & Mandelker, 1990). The first public release of information about these proposals occurs when the firm mails the proxy statement containing the proposal to stockholders. Thus, we define the proxy mailing date as the announcement date.

We chose an event window of 50 days before the proxy mailing date (-50) to 5 days following the proxy mailing date (+5). An average of 27 trading days (and a median of 24) separates the board meeting date (when an amendment is passed) from the proxy mailing date (Linn & McConnell, 1983). Although it is against SEC rules to solicit actively votes before the proxy mailing date, the possibility remains that the board decision to adopt antitakeover amendments is leaked to some market participants. The market returns in the -40 to -20 interval roughly surround the board meeting date. We chose 50 days before the proxy mailing date to ensure the inclusion of the board meeting date. We chose 5 days after the proxy mailing date as a sufficient time period for the market to react fully to the antitakeover amendment provisions. We expect any resulting changes in stock prices, due to the perceived effect of antitakeover provisions, to occur immediately around the proxy mailing date.

Empirical Analysis. Methodologies based on the market model using ordinary least squares (OLS) and using standard parametric tests are well-specified under a variety of conditions for daily stock return data (Brown & Warner, 1980, 1985). A detailed discussion of this methodology which is used in this study is provided in the appendix. The security market rates of return utilized in testing were taken from the CRSP (Center for Research in Security Prices, University of Chicago) daily file for firms listed on the New York Stock Exchange, the American Stock Exchange and the National Association of Security Dealers.

To test hypotheses 3 and 4 that examine the linear relationship between board structure and market reaction to the adoption of antitakeover provisions, we regressed the standardized cumulative abnormal returns of firms in our sample on board composition, leadership, and five control variables. Control variables included: (1) a firm's insider stock ownership (Hill & Snell, 1989); (2) institutional ownership (i.e., investment companies, insurance companies, banks and trusts & college endowment funds); (3) size (i.e., market value of equity); (4) book equity / market equity (Lang, Stulz & Walkling, 1989); and (5) type of antitakeover provision.

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Board composition was measured as the proportion of outsiders (not current or previous executives of the firm) on the board. Leadership of the board was measured as a dummy variable: 1, if the CEO and chair of the board were held by different individuals and 0, if they were held by the same individual.

Market reactions to antitakeover amendments can depend on managerial stock ownership (McWilliams, 1990; Stulz, 1988). Stockholder reactions to antitakeover proposals consist of two components: a positive component associated with an increase in managerial bargaining power provided by antitakeover provisions, and a negative component associated with a decrease in probability of a successful takeover. Researchers argue that in the case of firms with low managerial stock ownership, the positive component is likely to be higher than the negative component. For firms with high managerial stock ownership, negative stock reaction associated with reduction in perceived probability of a successful takeover is higher than the positive reaction associated with increased bargaining power (McWilliams, 1990; Stulz, 1988). We measure insider ownership as percentage of equity held by inside board members including the CEO.

Level of institutional ownership has an impact on stock reactions to antitakeover proposals (Agrawal & Mandelker, 1990; Brickley, Lease & Smith, 1988). The negative effect of antitakeover proposals may be less for firms with larger institutional ownership because of investors' voting power and monitoring influence in the event of a takeover bid (Agrawal & Mandelker, 1990; Brickley, Lease & Smith, 1988). Therefore, we controlled for institutional stock ownership measured as a percentage of total equity.

Size was included as a control variable since antitakeover provisions may be particularly effective for discouraging takeovers of large firms. One also can anticipate that firms with larger book equity / market equity (and therefore probably performing poorly due to inefficiency) will receive more negative reaction to the adoption of antitakeover provisions.

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Finally, we used a dummy variable to control for the effects of the type of antitakeover provision adopted. The dummy variable was coded 1 if the antitakeover provision was a poison pill and 0 for other considered amendments. Following the logic of Walsh & Seward (1990) discussed above, one would anticipate that this variable would be negative and significant.

RESULTS

Results of the stock price reaction of the non-operating antitakeover provisions that require stockholder approval (supermajority, classified board, fair-price, reduction in cumulative voting, and anti-greenmail) are presented in Table 4. For the event window (-50, +5) the CAR over the 56 day period decreased by 2.50 percent. The decrease in the CAR is significantly different from zero at the 0.01 level using a two tailed test. Our result is consistent with the managerial entrenchment hypothesis (Hypothesis 1)[4]. To make sure that our results are not influenced by outliers we also tested for the fraction of firms in our sample with negative CARs. As can be seen in Table 4, 59.02% of firms had negative CARs which is significant at the 0.01 level using a two-tailed test.

Table 5 presents the corresponding empirical results for the poison pill provisions. The CAR for the period (-50, +5) is -2.42 percent, which is statistically significant at the 0.01 level using a two-tailed t-test and is again consistent with Hypothesis 1 (managerial entrenchment hypothesis). The fraction negative is 56.41% and is significant at the 0.05 level using a two-tailed test.

Insert Tables 4 and 5 about here

In order to test hypothesis 2 for differences between the two groups, we compare the 56 day period mean CARs for the two groups (non-operating provisions that require stockholder approval and operating antitakeover provisions that do not require stockholder approval) and find that the difference is not significant[5]. This result is contrary to Hypothesis 2, which predicted that the market is likely to react more negatively to the adoption of operating

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antitakeover provisions that do not require stockholder approval than to the adoption of non-operating antitakeover provisions that require stockholder approval[6]. Thus, distinctions between operating and non-operating antitakeover provisions, and between requirements of stockholder approval and non-stockholder approval do not appear to be critical dimensions that influence stockholder reactions to antitakeover provisions.

The results of regression analyses testing hypothesis 3 and 4 are reported in Table 6. Contrary to hypothesis 3, a larger percentage of outside board members leads to a more negative stock reaction to antitakeover provisions. One explanation is that the market may anticipate the adoption of antitakeover amendments when there is a large percentage of inside board members. Consequently, this anticipated action is already impounded in the price of the stock, resulting in a relatively smaller reaction around our event windows. On the other hand, the adoption of antitakeover provisions by boards with a larger percentage of outside directors is unanticipated and consequently there are more negative market reactions.

Insert Table 6 about here

Consistent with hypothesis 4, antitakeover measures adopted by firms with an individual occupying the positions of CEO and chairperson of the board leads to a significantly more negative stock price reaction than a takeover defense adopted by a firm with a separate CEO and chairperson of the board. This result is suggestive of the value of approval of the takeover defense by a (presumably) more impartial chairperson.

Inside ownership and institutional ownership appear to have no (linear) relationship with stock price reaction to antitakeover provisions. Large firms receive a more negative (and statistically significant) stock market response upon adoption of antitakeover provisions. This result suggests that the market may regard antitakeover provisions adopted by large firms to be particularly effective in

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lowering the probability of a takeover. Firms with larger book equity / market equity (and therefore are probably performing poorly due to inefficiency) also receive a more negative (and statistically significant) stock market reaction.

Finally, in model 2 of Table 6 we perform a second test of Walsh and Seward's (1990) prediction of greater negative reactions for poison pill (cell 3) provisions relative to other antitakeover (cell 2) amendments that controls for governance variables. The dummy for the poison pill variable was insignificant. This result provides further evidence that hypothesis 2 does not hold up to empirical scrutiny.

CONCLUSIONS

Three findings emerge from this study. First, consistent with prior findings based on the SEC (1985) sample, the market reacts negatively to antitakeover provisions adopted by firms in our sample based on the IRRC data base. Second, market reactions do not vary based on Walsh and Seward's (1990) dimensions. Finally, the most significant finding of our study is market reaction to antitakeover provisions vary based on corporate board structure.

Our empirical findings indicate that the market reacts negatively to the adoption of both groups of antitakeover provisions. The observed stock-price reaction to antitakeover provisions is thought to have at least three components: a negative component associated with the reduced probability of a successful offer, a positive component associated with a lowering of the costs of negotiating higher-valued offers, and a positive component associated with additional information about managers' expectations of a takeover. Our empirical results indicate that the negative component outweighs the sum of the positive components in both groups.

Negative stockholder reactions support the managerial entrenchment view espoused by the U.S. Securities and Exchange Commission (1985), and by legal scholars such as Easterbrook and

Fischel (1981). Protective responses while serving the interests of incumbent managements are dysfunctional from the standpoint of stockholders[7] (Williamson, 1975: 160-161).

Our results are particularly strong since the tests are biased against the managerial entrenchment hypothesis. The proposal of antitakeover amendments may provide information, signaling an increased probability that the firm may currently be a takeover target. The signal of a potential bidder to the target stockholders empirically leads to an increase in the stock price. Thus, the significant decline in the stock price around the event date of the antitakeover amendments, despite the positive signaling effect, strengthens our interpretation of the evidence in support of the managerial entrenchment hypothesis.

However, it is important to note that although we found a negative average impact, this does not preclude the possibility that some firms' antitakeover provisions actually benefit stockholders. Our test is properly interpreted as providing evidence concerning the average effect of antitakeover provisions on stockholder wealth. With this important caveat clearly in mind, we have been persuaded by the empirical evidence that antitakeover provisions are generally detrimental to stockholders in support of Hypothesis 1.

With respect to differential wealth effects of antitakeover provisions, our results indicate no significant difference in stockholder reaction to operating antitakeover provisions that do not require stockholder approval and to non-operating antitakeover provisions that require stockholder approval. Both sets of antitakeover provisions are viewed by stockholders as equally negative. These results indicate that stockholders do not discriminate between antitakeover provisions on the basis of the dimensions we studied.

Walsh and Seward's (1990) dimensions may not be expected to be critical in terms of stockholder wealth effects, as suggested by our results, since: (1) operating antitakeover provisions, such as poison pills that have not been activated, may be as easily reversible as non-operating

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antitakeover provisions and (2) stockholders in widely held corporations may be "rationally ignorant" (Baysinger & Butler, 1985a) as they do not have an incentive to study closely every decision which is put to their approval. Rationally ignorant stockholders may be in a majority, in which case they may not participate in the voting process and hence be indifferent to Walsh and Seward's (1990) dimensions. Moreover, (back-end) poison pills in cell 2 and fair price amendments in cell 3 (of Table 3) are both similar in intent (i.e., to prevent two-tier tender offers). Expecting significantly different stockholder reactions do not appear warranted in this case.

Based on our study it is premature to reject the importance of the two dimensions proposed by Walsh and Seward (i.e, operating versus non-operating antitakeover provisions and stockholder approval versus non-stockholder approval). Although these dimensions were not perceived differently by stockholders in the 1984-1988 time period, these dimensions may be important predictors of other consequences of antitakeover provisions, such as probability of receiving takeover bids, future competitive position, and subsequent firm performance.

The findings of our study indicate significant differences in market reaction to antitakeover provisions based on the structure of firms' board of directors, especially its composition and leadership. More specifically, the market reacts more negatively to antitakeover provisions adopted by outsider-dominated boards than to antitakeover provisions adopted by boards with fewer outsiders. Shareholder activists have sought to increase the number of outside board members on the assumption that outsiders are likely to be more independent and more cognizant of stockholder interests. Consequently, the market may not anticipate the adoption of antitakeover provisions by firms with a higher proportion of outsider board members. Therefore, the market reacts more severely negatively to antitakeover provisions adopted by such boards.

As expected, the market reacts less negatively to antitakeover provisions adopted by boards with a chairperson who is not the CEO than to antitakeover provisions adopted by boards chaired by

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the CEO. Several board reformists have advocated the value of separating the positions of CEO and chairperson of the board because it enables chairpersons to perform their governance roles. Our findings are consistent with this view. However, on a more cautionary note, the substantial optimism of the market to a board structure that involves sharing of CEO and chair roles between two individuals may also be due to the fact that such a structure is not common. In fact, Heidrick and Struggles (1986) surveyed the Fortune 1000 and found 86% of those CEOs also held the chair position. In our sample, 82% of the boards were chaired by the CEO. Time will tell whether there is continued optimism by the market regarding separation of the two roles as more boards adopt a separate CEO and chairperson of the board structure.

In summary, our study provides strong support for the management entrenchment view[8] of antitakeover provisions, and does not provide support for systematic differences in stockholder reactions to antitakeover provisions classified on the basis of Walsh and Seward's (1990) framework. Finally, and most significantly in our view, market reactions to antitakeover provisions vary depending on firms' board structure.

APPENDIX

EVENT STUDY METHODOLOGY

Event study methodology is one of the most frequently used analytical tools in financial research (see Peterson, 1989 for a survey of 64 published empirical articles that use this methodology). The objective of an event study is to assess whether there are abnormal returns earned by security holders accompanying specific events (e.g., announcement of proposals for antitakeover amendments) where an abnormal return is the difference between the observed return and that appropriate given a particular return generating model (e.g., CAPM). Brickley (1986) documents a zero abnormal return around the proxy mailing date for a random sample of firms without unusual items in the proxy.

The statistical tests presented below consider the estimation of the market-price impact associated with public announcement of proposed antitakeover provisions. We utilize capital market residual analysis techniques (Fama, Fisher, Jensen & Roll, 1969). If we assume that security returns have a multivariate normal distribution, a single factor model consistent with the capital asset pricing model (Sharpe, 1964) can be formulated for time-event studies. Therefore, the statistical tests described below entail a joint hypothesis of market efficiency[9], the capital asset pricing model[10], and the effects of antitakeover provisions.

Specifically, the market model is assumed to be a valid representation of the stochastic process which generates returns for security j in time period t:

$$\tilde{R}_{jt} = \alpha_j + \beta_j \tilde{R}_{mt} + \tilde{\epsilon}_{jt} \qquad (1)$$

where

$\tilde{R}_{jt}$ = stochastic return on security j over time period t

$\tilde{R}_{mt}$ = stochastic return on a market portfolio of common stocks over time period t, and

$\tilde{\epsilon}_{jt}$ = disturbance term for security j at time period t which is assumed to be normally distributed with zero mean, serially uncorrelated and has constant variance over time.

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According to the market model, each security's period t return is expressed as a linear function of the corresponding time period's return on the market portfolio plus a random error term which reflects security specific effects.

The market model is implemented by computing ex-post abnormal returns for each security as

$$AR_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j R_{mt}) \qquad (2)$$

where R_{jt} and R_{mt} are the observed returns for security j and the market portfolio, respectively, in time period t relative to the event date of interest.

The security specific parameters $\hat{\alpha}_j$ and $\hat{\beta}_j$ are estimated over a period of 110 days (-160 to -51) preceding the event date (Linn & McConnell, 1983). To reduce the impact of random estimation errors, portfolios are formed in event time such that each daily abnormal return is an equally weighted average of individual securities' abnormal returns for that common event date,

$$\overline{AR}_t = \sum_{j=1}^{N} AR_{jt} / N,$$

where N is the number of securities in the portfolio on event date t. Cumulative average abnormal returns are computed as:

$$CAR_t = \sum_{k=-50}^{t} \overline{AR}_k, \qquad \text{where } t = -50 \text{ through } +5.$$

To determine the statistical significance of the average abnormal returns, we employed a parametric mean test as described in Linn and McConnell (1983). The statistic used to test the null hypothesis is computed as:

$$Z = \overline{\overline{AR}}_t / S(\overline{\overline{AR}}), \qquad (3)$$

$$\text{where} \qquad \overline{\overline{AR}}_t = 1/N \left(\sum_{j=1}^{N} \hat{AR}_{jt} \right)$$

$$S(\overline{\overline{AR}}) = (T-2/(N(T-4)))^{1/2}$$

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and $\quad \hat{AR}_{jt} = AR_{jt} / S_t(AR_j)$

where

$$S_t(AR_j) = \left(S_j^2 \left(1 + 1/T + (R_{mt} - \overline{R}_m)^2 \Big/ \sum_{t=1}^{T} (R_{mt} - \overline{R}_m)^2 \right) \right)^{1/2}$$

and

S_j^2 = residual variance from the ordinary least squares estimation of the market model for security j

$\overline{R}_m$ = average return on the market portfolio computed over the same event period used to estimate the market model for security j

T = total number of days in the interval used to estimate the market model, and

N = number of securities in the portfolio of interest.

The Z-statistic in (3) is distributed approximately unit normal for large N.

The test statistic of the null hypothesis that the cumulative average residual (CAR) is equal to zero is computed as:

$$Z_t = \overline{CAR}_t / S(\overline{\overline{AR}}), \qquad (4)$$

where

$$\overline{CAR}_t = \left(1/N \sum_{j=1}^{N} \hat{CAR}_j \right)$$

$$\hat{CAR}_j = \left(\sum_{t=1}^{T} \hat{AR}_{jt} \right) / (T)^{1/2}$$

The Z-statistic in (4) is distributed approximately unit normal for large N.

Several methodological issues concerning event studies must be addressed (Brown & Warner, 1985). First, a pre-event period was chosen to estimate the parameters α and β in the market model. These parameters may change due to the event, thus yielding potentially biased and inefficient estimates for the market model. Changes in the parameter values are generally not a major concern when events are non-operating, that is, when the events do not change the asset structure (business risk) or the capital structure (financial risk) of a firm. However, two situations may cause pre-event

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estimates of α's and β's to be unreliable. First, if rumors about a takeover of the firm circulated before the board meeting date (rumors which may have lead to the proposal of the antitakeover provision), the α's in the pre-event period may be overestimated due to the positive stock impact of the rumor. Second, if information of the proposal were "leaked" to some market participants the α's may be overestimated or underestimated, depending on the impact of the impending proposal. We therefore replicated our event study test using a post-event estimation period ($+11$ to $+120$) in place of our pre-event estimation period (-160 to -51) to estimate α and β, and still found significantly negative CAR's which is consistent with our earlier results supporting the managerial entrenchment hypothesis.

Second, correlation among securities due to clustering of events in calendar time violates the OLS assumption of contemporaneously uncorrelated error terms. In this study, cross-correlation is not viewed as a problem since the event dates are scattered through the years which we study. In addition, the problem of non-synchronous trading (Scholes & Williams, 1977) was not considered a major problem due to the long event window.

Third, a consistent choice of market index is needed in order to properly interpret the results (Brown & Warner, 1985). Thus, the equally-weighted market index was used in order to be consistent with the equal weighting of the firms in the event-study portfolio. Moreover, Brown and Warner (1980) simulations indicate that the precision with which beta and hence residuals are measured is higher with the equally weighted index rather than the value weighted index.

Finally, we tested for increased variance around the event date which would violate the OLS assumption of constant variance and would not allow standard interpretations in the t-tests for significance. We could not reject the hypothesis that the residuals from the OLS regression (1) above had the same variance before and after the event date, implying constant variance is a reasonable assumption[11].

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1. Pugh, Page and Jahera (1992) provide empirical support that upon passage of antitakeover provisions, managers adopt a longer-term view with respect to capital expenditure and research & development. However, Mallette (1991) finds no such relationship and Meulbroek, Mitchell, Mulherin, Netter and Poulsen (1990) find a significantly negative relationship between a firm's adoption of antitakeover provisions and subsequent research & development expenditures.

2. Prices are revised as people learn. Indeed, learning is a prerequisite for an evolving efficient market in a world of change. The market may learn more about the error term over time (Jarrell & Poulsen, 1987). Learning implies neither an inefficient market nor asymmetric information. Or put differently, the efficient market assumption of common knowledge at a point in time is not necessarily inconsistent with (collective) learning over time. Indeed, the cornerstone of the efficient market hypothesis is the assumption of instantaneous diffusion of learning. This assumption enables financial theorists to maintain simultaneously: (1) static efficiency; (2) learning; and (3) no asymmetric information.

3. Since the IRRC publication follows the larger firms, most of the firms in our sample are traded on the NYSE and AMEX. Therefore, few firms in our sample are traded on NASDAQ: 4 of the 195 firms adopting poison pills and 15 of the 184 firms adopting other antitakeover provisions were traded on NASDAQ. Since these firms comprise only 5% of our sample the results are robust to the decision to include them.

4. Formally, the hypotheses which we are testing are:

H_0 : CAR_5 $=$ 0   Null hypothesis of no stockholder wealth effect
H_{1A} : CAR_5 $>$ 0   Supports the stockholder wealth hypothesis
H_{1B} : CAR_5 $<$ 0   Supports the managerial entrenchment hypothesis

5. Our finding of an absence of a differential impact between antitakeover provisions in cell 2 and cell 3 are robust to changes in the event window (e.g., (-1, +1)). Due to leakage of information, we maintain the (-50, +5) window is the most appropriate and is reported in detail in Tables 4 and 5. Details on our results from other windows are available from the authors upon request.

6. As Bhagat and Jefferis (1991) note, firms tend to bundle antitakeover provisions. For multiple anti-takeover provisions we regressed CAR's on dummy variables representing the types of antitakeover provisions, and again conclude that differences of effects among takeover defense types were not significant.

7. While our event study does not **prove** that managers are acting opportunistically, our empirical results should make one skeptical that antitakeover provisions improve stockholder wealth. As Williamson observes: "The contract between the firm and the shareholders actually can be, and sometimes is, adjusted by making changes in the corporate charter. These changes appear, however, mainly to be initiated by the management and are frequently management-favoring in character (1985: 305). We take the stance that antitakeover provisions are a manifestation of self-interest seeking on the part of some managers. The empirical results reinforce (but by no means prove) our system of belief. While theories of self-interest seeking may be pushed to excess, we suggest that the adoption of antitakeover provisions is important evidence that agency problems are present. In this regard our worldview is not unlike Kesner & Dalton, 1985. Finally, there are several signaling models which have suggested that antitakeover provisions are in

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the "long-run" interest of stockholders. To be blunt, signaling models in game theory can be used to explain just about anything. For an example that makes this point while bringing some fun into these games, see Postrel's (1991) Flaming Trouser Equilibrium. Similarly, Saloner notes that: "the degree of modeling discretion is so significant that a model can be devised to explain almost any fact" (1991:129). Signaling models which claim that antitakeover provisions increase stockholder wealth do not stand up to empirical scrutiny.

8. To answer the question: "Why would stockholders approve changes against their interests?", we suggest that stockholders are "rationally ignorant" (Baysinger & Butler 1985a). Uninformed stockholders may be in the majority, in which case rationally ignorant stockholders may vote to establish amendments which are not in their best interest or they may not vote at all in which case it is assumed to be a vote in favor of passage of the amendment(s). On the other hand, in 1985 for example, the top 100 institutional investors voted three-to-one against fair-price amendments (Jarrell & Poulsen, 1987). Moreover, Jarrell and Poulsen (1987) point out that firms adopting antitakeover amendments have higher than average insider holdings and lower than average institutional holdings, which may explain why management of some firms are able to successfully propose amendments which are not in the best interest of the stockholders of their firm. On-the-job benefits must outweigh the greater costs incurred by insiders with large stockholdings in the form of the decrease in share value. Finally, institutional ownership is lower in firms that experience negative abnormal returns around antitakeover proposals (Agrawal & Mandelker, 1990; Brickley, Lease & Smith, 1988).

9. The efficient market hypothesis is in essence an extension of the zero profit competitive equilibrium condition from the certainty world of classical price theory to the dynamic behavior of prices in speculative markets under conditions of uncertainty. A market is efficient with respect to an information set if it is impossible to make economic (abnormal) profits by trading on the basis of the information set. While many in organization science take exception to the idea of perfect competition in product markets, the efficiency of security markets seems more plausible. The record on the efficient market hypothesis is extensive, and in large measure it is reassuring to advocates of the [semi-strong] efficiency of markets. Despite recognition of anomalous evidence regarding market efficiency, Jensen proclaims that: "I believe there is no other proposition in economics which has more solid empirical evidence supporting it than the Efficient Market Hypothesis" (1978:95). Although additional anomalous events have occurred since Jensen's proclamation (Shiller, 1984; Shleifer & Summers, 1990) (e.g., the stock market crash of October 19, 1987), empirical studies continue to provide support that the market is semi-strong form efficient (i.e., all publicly available information is impounded in the price of the stock). Furthermore, the price reaction to news appears to be almost immediate. For example, within 5 to 10 minutes of earnings or dividends announcements on the broad tape most of the price adjustment has occurred and any remaining gain from acting on the news is less than the transaction costs. In fact, empirical tests even tend to support the view that the market is gifted with a certain amount of foresight. News tends to leak out and be reflected in stock prices even before the official release of the information. This fact provides the rationale for our (-50, +5) event-study window. Finally, it should be noted that if the market was highly inefficient we would have mostly noise and insignificant results when we do event studies on abnormal returns for various events. Much of the empirical evidence (but by no means all) supports this papers premise of an efficient market.

10. Some of the assumptions of CAPM seem reasonable. First, it is assumed that investors require some extra return for taking on risk. Second, investors are concerned principally with those risks that they cannot eliminate by diversification. CAPM captures these ideas and suggests that the expected return on a security is positively (and linearly) related to the security's beta. The basic logic behind CAPM is that only undiversifiable or systematic risk will command a risk premium. In terms of obtaining expected returns by CAPM, Brown and Warner (1980, 1985) find that the OLS model that we use performs as well as other models. Fama and French (1992) also find that simpler models such as size of firm and Tobin's q (market

value to book value) explain just as much (or more) variance as beta. Our market model adjustment allows two measures of risk, the 'alpha' term and the 'beta' term. If small firms truly earn higher returns than larger firms, this difference will be captured by the 'alpha' term in the OLS regression during the estimation period. So if small firms earn more during the estimation period, they will be expected to earn more during the testing period. Similarly, if firms with higher market value to book value ratios earned higher returns than those with low market to book ratios, this difference would also be captured and adjusted by the 'alpha' term. This adjustment by both an 'alpha' and a 'beta' term makes the market adjustment robust to extraneous effects such as size effects, industry effects, or market to book effects. However, in order to test our conclusions under a different methodology, we adjust the firms' returns by the mean return on a portfolio of stocks with similar market capitalization (number of shares times price per share). The results indicate that our conclusions are robust to model specifications. Finally, the reader should note that in Table 6, we include both size and book-to-market as independent variables in order to capture potential model mis-specifications.

11. The event study methodology outlined in this appendix has been applied to many economic, financial and strategic management issues. In most instances, there is not one correct technique to apply, but many appropriate techniques (e.g., OLS regression, Scholes-Williams estimator, Dimson estimator, mean-adjusted and market-adjusted models) (see Brown & Warner, 1980, 1985; Peterson, 1989). We chose the OLS model with equally weighted indices. We chose the OLS model because it is grounded in theory (i.e., CAPM). Although the CAPM suggests the use of value-weighted index as a market index, we nevertheless follow many researchers in using the equally weighted index which is more likely to detect abnormal security returns. This result is due to the greater degree of correlation between the equally-weighted index and security returns; the greater the precision of the estimated parameters, the more easily detectable are the abnormal returns. The critical point to emphasize is that the estimation results are seldom sensitive to these choices among statistically correct approaches (Brown & Warner, 1980; Peterson, 1989).

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TABLE 1

DESCRIPTION OF ANTITAKEOVER PROVISIONS

Non-operating Antitakeover Provisions That Require Stockholder Approval:

(1) SUPERMAJORITY MERGER APPROVAL PROVISIONS typically stipulate stockholder approval percentages in the 66-80 percent range. Various supermajority stockholder approval requirements may block a bidder from implementing a merger even when the bidder controls the target's board of directors since stockholder approval may remain below the specified percentage. Supermajority amendments also typically include escape clauses applicable to actions such as mergers with a firm's subsidiary. If the board is able to determine when and if the supermajority provisions will be in effect, the amendment is said to have a board-out clause (Linn & McConnell, 1983).

(2) CLASSIFIED BOARD PROVISIONS segment (or stagger) the board of directors into classes with one class standing for election each year. Typically, with a classified board provision, one-third of the board is elected each year for a three-year term. With a classified board, a new majority stockholder would have to wait for two annual meetings to attain majority representation on the board before being guaranteed a successful proposal of a merger for stockholder vote (DeAngelo & Rice, 1983). Amendments to classify the board are often accompanied by a supermajority stockholder approval requirement in order to change the number of directors, thereby inhibiting a bidder from expanding the board and thus taking control by electing candidates to the newly created board positions. In practice, the directors are very likely to resign after a hostile bidder acquires the required number of shares. Nonetheless, lenders cannot be sure when the directors will resign and this can make a difference in some circumstances (Herzel & Shepro, 1990). By 1988 about one-half of Standard & Poors 500 firms had adopted classified boards (Ruback, 1988).

(3) The FAIR-PRICE AMENDMENT requires supermajority voting approval by stockholders for transfer of control if the bidder does not offer a "fair-price". Usually, the fair-price is defined as the highest price paid by the bidder for any shares acquired in the target firm during a specified period or some premium over market price. Sometimes the fair-price formula is more elaborate. Some fair-price amendments require outside appraisals. For example, the price paid in the merger may have to be approved as fair by an independent investment banking firm selected by independent directors. In many cases more than one test is used, and the required fair-price must at least match the highest of them (Herzel & Shepro, 1990). The amendments are effective mainly against hostile two-tier tender offers that can place diffuse stockholders on the horns of a prisoner's dilemma (Dixit & Nalebuff, 1991: 81-84). Courts uphold takeover bids structured as prisoner's dilemmas (McChesney, 1993). Hostile bidders can avoid the supermajority requirement of the fair-price amendment by making a uniform offer for all outstanding shares (Jarrell & Poulsen, 1987). The fair-price amendment limits the options of a firm's stockholders and this loss of flexibility may be a strategic advantage. This example is a special case of Schelling that: "the power to constrain an adversary may depend on the power to bind oneself: that in weakness there is strength, freedom may be freedom to capitulate, and to burn bridges behind one may suffice to undo an opponent" (1960: 22). The sacrifice of the stockholders' freedom to accept a two-tier offer enables the target firm's stockholders to avoid the prisoner's dilemma.

(4) REDUCTION IN CUMULATIVE VOTING restricts the rights of stockholders to accumulate their votes in favor of a particular director or board of directors. The number of votes to which a stockholder is entitled is the number of shares owned multiplied by the number of directors to be elected in a given

year. Therefore, with cumulative voting it may be possible for minority stockholders to elect some board members even if the majority of stockholders oppose their election. A reduction in cumulative voting rights reduces the minority stockholders' ability to elect their nominees as directors (Bhagat & Brickley, 1984) and thus makes the firm a less desirable takeover target.

(5) ANTI-GREENMAIL PROVISIONS are amendments to the corporate charter which prohibit payment of greenmail. Greenmail involves private repurchase of a sizeable block of company stock at a premium (Davis, 1991; Mikkelson & Ruback, 1985, 1991)). These transactions often occur under the explicit or rumored threat of takeover by a substantial stockholder or stockholders (Bagwell, 1991; Macey & McChesney, 1985). In exchange for a premium above market price, the raider agrees not to acquire the firm and displace incumbent management (Bradley & Wakeman, 1983; Dann & DeAngelo, 1983; Kosnik, 1987). Often this transaction is followed by a standstill agreement whereby the raider also agrees not to acquire stock in the concerned company for a specified period of time, often for as long as five years (Shleifer & Vishny, 1986). Managers who engage in targeted block share repurchases frequently are expelled from corporate ranks and the probability of being replaced increases with the repurchase premium paid (Ang & Tucker, 1988; Klein & Rosenfeld, 1988b). Klein & Rosenfeld (1988a) find the average premium over market paid in greenmail is 22 percent. Well known cases of greenmail include: (a) Walt Disney Productions payed $325 million for Saul Steinberg's $4.2 million shares of common stock, an average of $14.25 per share more than he paid originally; (b) Rupert K. Murdoch received a 35 percent premium for his shares of Warner Communications; (c) The Bass Brothers netted $400 million after Texaco bought back their 10 percent stake at $5 per share premium; (d) T. Boone Pickens purchased a large portion of Gulf's outstanding shares and later sold them back at a premium; (e) Carl Icahn used greenmail techniques with such companies as Saxon Industries, Hammermill Paper Company, Gulf & Western, American Can Company, Marshall Field and ACF Industries (Kesner & Dalton, 1985). Typical anti-greenmail charter amendments prohibit firms from repurchasing some or all of the common (voting) stock of an "interested" stockholder, normally defined as a stockholder who owns 5% or more of the outstanding common stock and who acquired this ownership within the past three years (Eckbo, 1990).

Operating Antitakeover Provision That Does Not Require Stockholder Approval:

(6) POISON PILLS belong to cell 3 of Table 3 as they are operating measures and do not require stockholder approval. Poison pill provisions provide target stockholders the right to purchase additional shares at a discount or to sell shares to the target at very attractive prices. The target stockholders' right to purchase at a discount is known as a flip-over plan. Under the flip-over plan, the firm declares a common stock dividend in the form of rights to purchase some class of its own securities, usually common stock. For example, Crown Zellerbach's common stock purchase rights had an exercise price of $100 per share while Crown common stock traded at $30 per share (Maletesta & Walkling, 1988). If an acquirer merges with the firm, the rights "flip over" and holders are entitled to purchase shares in the surviving firm at a substantial discount from the post-merger market price, typically 50% (MacMinn & Cook, 1991). In our example, if the rights' exercise price is $100 and the surviving firms' stock when the merger is consummated trades at $50 per share, each right entitles its holders to purchase 4 shares of stock for $100.

In the more potent flip-in plan, the mere acquisition of a threshold stake (usually between 10% and 20%) enables the rights' holders to purchase additional shares of the target firm at a discount (Choi, Kamma & Weintrop, 1989). The intended result is that no one dares to pass the flip-in triggering percentage, and bidders are forced to negotiate with target boards (Herzel & Shepro, 1990). Finally, the right to sell shares to the target at an attractive price is called a back-end plan (Ryngaert, 1988). Back-end plans are so named because they attempt to place a specific minimum price on the back-end of a two-tier acquisition bid (Malatesta & Walkling, 1988).

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TABLE 2

AUTHORS	SAMPLE	TYPE OF DEFENSE	EVENT WINDOW	CAR
Agrawal & Mandelker (1990)	356 defenses (1979-1985)	CB, SM, FP	(-40, +1)	-2.6 ***
Bhagat & Brickley (1984)	19 defenses (1962-1982)	RCV	(-1, +1)	-1.57 *
Choi, Kamma & Weintrop (1989)	267 defenses (1985-1986)	PP	(-1, +1)	-0.48 ***
DeAngelo & Rice (1983)	100 defenses (1974-1979)	CB, SM	(-40, +10)	-0.55
Eckbo (1990)	32 defenses (1984-1985)	AG	(0, +1)	-0.48
Jarrell & Poulsen (1987)	649 defenses (1979-1985)	FP (408 amend.) SM (48 amend.) CB (28 amend.)	(-20, +10) (-20, +10) (-20, +10)	-0.65 -4.92 ** -1.29
Lauterbach, Malitz & Vu (1991)	383 defenses (1979-1985)	CB, SM, FP	(-20, -1)	-0.43
Linn & McConnell (1983)	388 defenses (1960-1980)	CB, SM, FP	(-90, +90)	0.99
Mahoney & Mahoney (1993)	409 defenses (1974-1988)	CB, SM	(-50, +10)	-1.6 ***
Malatesta & Walkling (1988)	113 defenses (1982-1986)	PP	(-1, 0)	-0.915 ***
McWilliams (1990)	765 defenses (1980-1984)	CB, SM, FP	(-40, -1)	-0.63
Ryngaert (1988)	283 defenses (1982-1986)	PP	(-1, 0)	-0.34 *

AG = Anti-greenmail
CB= Classified Board
FP = Fair-price
PP = Poison Pill
RCV= Reduction in Cumulative Voting
SM = Supermajority

Note: date 0 = proxy mailing date

* = significant at 10% level
** = significant at 5% level
*** = significant at 1% level

TABLE 3

Antitakeover Provisions

	Operating	Non-operating

Stockholder Approval Required	1
	
	Example:
	    Dual-class
	    recapitalizations
		2
		
		1. Supermajority
		   amendments
		2. Classified Boards
		3. Fair-price amendments
		4. Reduction in cumula-
		   tive voting rights
		5. Anti-greenmail

No Stockholder Approval Required	3
	
	1. Poison pills
		4
		
		Example:
		    Golden
		    parachutes

Mechanisms intended to restrict transfer of managerial control (adapted from Walsh & Seward,1990: 438). This paper focuses on antitakeover provisions in cells 2 and 3.

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TABLE 4

Supermajority, Classified Boards, Fair-price, Reduction in Cumulative Voting, and Anti-greenmail

Daily abnormal returns surrounding the event date for the proxy mailing date of one or more of the 5 amendments. (Number of observations: N=184)

Event date	Average residual		CAR		Fraction negative	
-50	-0.0009		-0.0009		0.5628	
-40	0.0030		-0.0058	*	0.5738	*
-39	0.0014		-0.0044	*	0.5902	**
-38	0.0003		-0.0041	*	0.5956	**
-37	-0.0016		-0.0057	*	0.5847	*
-36	-0.0039	**	-0.0096	**	0.6175	**
-35	-0.0021		-0.0177	**	0.6175	**
-34	-0.0031	**	-0.0148	**	0.6339	**
-33	-0.0013		-0.0162	**	0.6120	**
-32	0.0019		-0.0143	**	0.5792	*
-31	-0.0006		-0.0149	**	0.5902	**
-30	-0.0022	*	-0.0171	**	0.6011	**
-29	-0.0002		-0.0172	**	0.6011	**
-28	0.0007		-0.0166	**	0.6066	**
-27	0.0012		-0.0154	**	0.6066	**
-26	0.0002		-0.0152	**	0.5792	*
-25	-0.0012		-0.0164	**	0.5792	*
-24	0.0018		-0.0145	**	0.5902	**
-23	-0.0008		-0.0154	**	0.5574	
-22	0.0001		-0.0153	**	0.5792	*
-21	-0.0004		-0.0156	**	0.5792	*
-20	-0.0007		-0.0164	**	0.5574	
-19	-0.0016		-0.0179	**	0.5638	
-18	-0.0006		-0.0186	**	0.5847	*
-17	0.0008		-0.0177	**	0.5792	*
-16	0.0015		-0.0162	**	0.5628	
-15	0.0015		-0.0147	*	0.5792	*
-14	-0.0012		-0.0159	*	0.5902	**
-13	-0.0010		-0.0169	**	0.6011	**
-12	0.0020		-0.0149	*	0.5628	
-11	0.0004		-0.0145	*	0.5574	
-10	0.0008		-0.0137	*	0.5464	
- 9	0.0001		-0.0136	*	0.5792	*
- 8	0.0000		-0.0135	*	0.5738	*
- 7	-0.0003		-0.0139	*	0.5847	*
- 6	-0.0010		-0.0149	*	0.5902	**
- 5	-0.0009		-0.0158	*	0.5847	*
- 4	-0.0020		-0.0178	*	0.5847	*
- 3	-0.0009		-0.0187	*	0.5902	**
- 2	-0.0004		-0.0191	*	0.6011	**
- 1	-0.0015		-0.0207	**	0.5792	*
0	-0.0020		-0.0227	**	0.5738	*
+ 1	-0.0007		-0.0234	**	0.5792	*
+ 2	-0.0024		-0.0257	**	0.5902	**
+ 3	-0.0004		-0.0261	**	0.5902	**
+ 4	0.0005		-0.0256	**	0.5847	**
+ 5	0.0007		-0.0250	**	0.5902	**

* indicates statistical significance at the 5% level using a two-tailed test.
** indicates statistical significance at the 1% level using a two-tailed test.

TABLE 5

Poison Pill Provisions

Daily abnormal returns surrounding the event date for the proxy mailing date
of poison pill antitakeover provisions.   (Number of observations: N=195)

Event date	Average residual	CAR	Fraction negative
-50	-0.0015	-0.0015	.5744
-40	-0.0015	-0.0028	.5333
-39	-0.0033 **	-0.0061	.5538
-38	-0.0003	-0.0065	.5590
-37	-0.0016	-0.0081	.5436
-36	0.0004	-0.0077	.5333
-35	-0.0009	-0.0086	.5436
-34	-0.0016	-0.0102 *	.5436
-33	-0.0009	-0.0111 *	.5179
-32	-0.0005	-0.0116 *	.5385
-31	-0.0012	-0.0128 *	.5538
-30	-0.0001	-0.0129 *	.5641
-29	0.0001	-0.0127 *	.5385
-28	0.0015	-0.0113	.5077
-27	-0.0005	-0.0118	.5077
-26	-0.0006	-0.0124	.5231
-25	0.0003	-0.0121	.5128
-24	0.0020	-0.0101	.5077
-23	0.0004	-0.0097	.5179
-22	-0.0003	-0.0101	.5077
-21	0.0016	-0.0085	.5026
-20	0.0006	-0.0079	.4974
-19	-0.0013	-0.0092	.5026
-18	-0.0004	-0.0096	.5026
-17	-0.0004	-0.0099	.5333
-16	-0.0004	-0.0104	.5179
-15	0.0026 **	-0.0078	.5231
-14	0.0011	-0.0067	.5179
-13	0.0003	-0.0067	.5231
-12	-0.0013	-0.0064	.5385
-11	-0.0023 *	-0.0077	.5179
-10	-0.0006	-0.0101	.5333
- 9	-0.0008	-0.0115	.5179
- 8	-0.0020	-0.0135	.5128
- 7	0.0008	-0.0127	.5128
- 6	-0.0035 **	-0.0162 *	.5231
- 5	-0.0006	-0.0168 *	.5231
- 4	-0.0021	-0.0189 *	.5385
- 3	-0.0003	-0.0191 *	.5436
- 2	-0.0004	-0.0196 *	.5641 *
- 1	-0.0021	-0.0216 *	.5641 *
0	0.0008	-0.0208 *	.5385
+ 1	-0.0012	-0.0220 *	.5436
+ 2	-0.0017	-0.0237 *	.5436
+ 3	-0.0002	-0.0239 *	.5333
+ 4	-0.0006	-0.0245 **	.5641 *
+ 5	0.0003	-0.0242 **	.5641 *

* indicates statistical significance at the 5% level using a two-tailed test.
** indicates statistical significance at the 1% level using a two-tailed test.

TABLE 6

REGRESSION OF STOCK PRICE REACTION TO FIRM CHARACTERISTICS

In order to find what characteristics of firms affect stock price reaction, we regress the standardized cumulative abnormal returns of firms in our sample on observable firm characteristics (T-statistics are in parentheses).

Independent variables	MODEL 1	MODEL 2
Intercept	1.175789 (3.475)	1.172617 (3.459)
Board composition (% of outside board members)	-1.194789 (-2.981)	-1.184530 (-2.933)
Dummy for separate CEO/Chairperson (= 1 if separate 0 otherwise)	0.274664 (1.861)*	0.275380 (1.864)*
Inside ownership (percent of equity)	-0.001131 (-0.186)	-0.001154 (-0.190)
Institutional ownership (percent of equity)	-0.001203 (-0.453)	-0.001146 (-0.362)
Size (market value of equity)[1]	-0.000061 (-3.467)	-0.000063 (-3.470)
Book equity / market equity[1]	-0.535264 (-3.136)	-0.537184 (-3.140)
Dummy for poison pill (= 1 if poison pill 0 otherwise)		-0.027248 (-0.225)
R-squared	0.0672	0.0673

* = parameter is significantly different from zero at the 10% level, using a two-tailed test.
— = parameter is significantly different from zero at the 5% level, using a two-tailed test.
— = parameter is significantly different from zero at the 1% level, using a two-tailed test.

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[1] Our empirical results were robust when book equity/market equity and/or size were excluded from the regression. There were no apparent problems of multicollinearity in the models.