

# The Influence of Manager's Wealth on Adopting Antitakeover Measures

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## 〈요 약〉

기업인수합병(M&A) 시장의 활성화에 따라 적대적 공개매수를 방어하기 위한 반인수조치(Antitakeover Techniques)들에 관한 관심도 고조되고 있다. 지금까지 널리 알려져 있는 대표적인 반인수조치들은 Fair Price Amendment(FPA), Classified Board Amendment(CBA)와 Poison Pills(PP) 등이다. 이들 대표적 세 반인수조치들 중에서 FPA와 CBA 채택의 경우는 주주들의 사전 승인이 요구되는데 반하여 PP는 주주들의 사전 승인없이 채택이 가능한 반인수조치이다. 이처럼 상이한 반인수조치들의 채택은 채택기업의 가치에 상이한 부의 효과를 미치는데, 이 분야의 많은 실증적연구 결과들이 보고되고 있다.

본 연구에서는 표본기업으로 현재까지 상호 개별적으로 연구되어 왔던 두가지 반인수조치(FPA, CBA)에 PP와 비채택기업도 포함시키고 있다. 지금까지의 반인수조치 채택에 따른 기업가치에 미치는 부의 효과에 관한 연구결과를 확인해보고, 반인수조치 채택에 관한 경영자의 의사결정과 경영자의 부 사이에 체계적인 관계가 존재하는지를 실증분석하고자 한다. 여기서 경영자의 부는 기업내부자 지분율과 기업내 경영자를 위한 Golden Parachute의 존재 유무로 측정한다.

본 연구에서는 3개의 가설을 설정하였다. 가설1: 만일 경영자가 주주의 이익을 희생하면서 자신의 이익을 위한 반인수조치를 채택한다면, 반인수조치 채택의 공표는 평균적으로 기업가치에 부(-)의 효과를 보일 것이다. 가설2: 경영자의 내부지분율이 낮을때 경영자들은 주주에게 가장 해로운 반인수조치를 선택할 것이다. 가설3: Golden Parachute가 존재하지 않을때 경영자들은 주주에게 가장 해로운 반인수조치를 채택할 것이다.

본 연구의 대상기업들중에서 반인수조치 채택 기업들은 IRRC 1990년도판에서 수집되었고, 대칭표본 기업으로 반인수조치를 채택하지 않은 기업들은 CRSP 파일에서 기업규모, SIC 코드를 대응시켜 선정하였다. 임원, 관계이사들과 친인척을 포함하는 내부자의 지분과 Golden Parachute 존재

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여부는 이 연구의 표본기업들의 Proxy Statement에서 수집하였다. 최종 표본기업은 FPA채택기업, CBA 채택기업, PP채택기업, 그리고 비채택기업으로 4개의 상호 배타적인 기업 그룹으로 구성되었다.

본 연구는 Event Study와 Multinomial Logistic Regression의 두가지 실증분석 방법을 사용하였다. Event Study 방법론은 반인수조치 채택 공표시 초과수익률을 조사하기 위해 사용하였다. Multinomial Logistic Regression은 선택된 반인수조치 종류와 설명변수들(내부자 지분율, Golden Parachute) 간에 체계적인 관계가 존재하는지를 검증하기위해 사용되었다.

반인수조치들을 채택하는 기업들은 반인수조치를 채택하고 있지않은 기업들에 비해 내부자 지분율이 낮게 나타났으며, 반인수조치중 PP를 채택한 기업에서 가장 낮은 내부지분율을 보이고 있다. GP 채택을 보면 PP를 선택한 기업의 50%가 GP를 채택하였다.

본 연구에서 반인수조치 채택 발표일 하루 전후의 초과수익률을 조사한 결과는 반인수조치 미채택기업, CBA, FPA 채택기업들의 초과수익률은 통계적으로 의미가 없었으나, PP채택에 따른 초과수익률은 의미 있는 부(-)의 값을 나타냈다. 이와같이 CBA와 FPA 채택기업들은 주주의 부를 감소시키지 않았으나 PP 채택기업들은 주주의 부를 감소시켰다. 따라서 경영자는 주주의 이익을 희생시키면서 자신의 이익을 위해 PP를 선택하고 있음을 보여주고 있다.

연구결과에 내부자 지분율의 크기가 경영자와 주주간의 이해를 효과적으로 일치시키고 있음을 제시하고 있다. 즉, 내부자 지분율이 큰 기업일수록 반인수조치를 채택하지 않거나 반인수조치 채택시에 주주의 이익에 반하지 않은 반인수조치를 선택하는 경향이 높다. Golden Parachute이 존재하는 기업은 FPA를 채택하거나 반인수조치를 채택하지 않는 것보다 PP나 CBA를 채택하는 경향이 더 높다.

한편 기업에서의 GP의 존재가 경영자의 가장 해로운 반인수조치 선택을 억제하지 못함을 보여주고 있는데, 이는 GP가 비효과적인 계약메카니즘임을 제기한다. GP가 경영자와 주주간의 이해를 일치시키도록하는 계약이라기 보다는 차라리 기업방어전략이 비효과적일때 경영자 자신의 안전판으로 제공되고 있음을 보여준다. 이 논문의 주요공헌은 기업내부자 지분율의 크기와 GP의 존재가 반인수조치 선택에 체계적인 영향을 미치고 있음을 보여준 것이다. 여기서 사용된 Multinomial Logistic 모델은 내부지분율 크기와 GP의 존재가 PP 또는 CBA가 채택될 것인지를 예측할 수 있게 한다.

## I. Introduction

In the extensive literature on antitakeover amendments, some researchers have concluded that managers use these amendments to entrench themselves at stockholders' expense(DeAngelo

and Rice, 1983); others have concluded that managers use them so that the firm can obtain higher tender premia in the event of a takeover attempt (Linn and McConnell, 1983). Empirical work has far been unable to resolve the debate. Studies that measure stock price reaction generally conclude that anticipatory defenses are harmful; however, this stock price reaction may be a misleading measure if antitakeover amendments are coupled with other announcements (Bhagat and Jefferis, 1990).

We hypothesize that managers use antitakeover amendments to entrench themselves when they have interests that diverge from shareholders' interests. Recent studies have addressed two strategies that provide such oversight or create mutual interest: fair price amendments and classified board provisions. Fair price amendments require that two-thirds of shareholders approve a merger unless the bidder agrees to pay a fair and equivalent price for all purchased shares. Classified board provisions stagger the board so that only a fraction of all directors are elected each year.

This paper examines these two strategies along with a third: poison pill amendments, which give shareholders security rights that, in event of a takeover attempt, enable them to purchase securities at a discount.<sup>1)</sup> We analyze whether firms that unilaterally adopt poison pill amendments are systematically different from firms that seek shareholder approval for classified board or fair price amendments. Specifically, this paper examines how wealth effects, as captured by insider ownership or golden parachute provisions for managers, influence the type of antitakeover amendment adopted. Managers should have motive to entrench themselves if they have interests less aligned with shareholders, as characterized by less insider ownership and fewer golden parachutes.

Our findings are consistent with earlier findings that poison pill amendments entrench managers; both Malatesta and Walkling (1988) and Ryngaert (1988) concluded that firms that adopt these amendments have less insider ownership and are more likely to become takeover targets. However, those studies did not investigate whether insider ownership and golden parachutes alter managers' incentives to adopt other types of amendments in preference to poison pill amendments. In two other studies, firms that propose classified board amendments or fair price amendments had less insider ownership than firms that proposed no amendments (Jarrell and Poulsen, 1987; Bhagat and Jefferis, 1991); these studies did not consider poison pill amendments. Our

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1) Jarrell and Poulsen (1987) and Malatesta and Walkling (1988) describe these three types of amendments in detail.

approach is similar to Bhagat and Jefferis' approach, but we include poison pills in the analysis and focus on firms adopting an amendment for the first time. Because of this focus on first-time amendments (and therefore of on firms that have only one type of amendment), we can investigate, for each type of amendment, whether it harms or benefits shareholders.

We find that insider ownership makes it less likely that firms will adopt amendments of any kind. Unlike Bhagat and Jefferis, we find that firms adopting fair price amendments and non-proposing firms have similar firm characteristics. Thus, fair price amendments do not harm shareholders when they are the only amendment adopted by a firm. We also find that firms adopting poison pills or classified board amendments are more likely to have provided golden parachutes--severance payments for managers in the event of a change in control--than are firms adopting fair price amendment or no amendments. Previous studies have predicted that golden parachutes diminish managers' incentives to fight a takeover and make those managers less likely to adopt antitakeover amendments (Lambert and Larcker, 1985; Knoeber, 1986; Harris, 1990). If as some studies conclude, poison pill amendments entrench managers, a golden parachute is an ineffect contracting mechanism--it is a safety valve than a means of aligning managers' and shareholders' interests.

The paper proceeds as follows: section 2 describes antitakeover techniques, section 3 presents hypotheses, section 4 and 5 describes the data and methodology respectively, section 6 provides empirical findings, and section 7 draws conclusions.

## II. Antitakeover Techniques

### **Antitakeover Charter Amendments**

Antitakeover charter amendments are placed in the firm's corporate charter by shareholder vote. They generally operate by imposing new conditions that must be satisfied before managerial control of the firm is changed, whether through a tender offer, a merger, or replacement of the board of directors. The amendments are proposed by managers and they require majority voting approval by shareholders. Antitakeover amendments are rarely not approved by voting shareholders.<sup>2)</sup>

Proponents argue that the amendments are designed to force a bidder to pay a higher premium

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2) See Brickley, Lease, and Smith (1988).

and purchase a larger fraction of the target firm's outstanding shares. Target firm shareholders capture a larger fraction of the total takeover-related gains. Opponents suggest that these devices effectively reduce the attractiveness of the firm to potential bidders.

The fair price amendment is a supermajority provision<sup>3) 4)</sup> with a board-out clause<sup>5)</sup> and additional clause waiving the supermajority requirement if the offer agrees to pay a so-called 'fair' price for all shares. This amendment generally requires that each shareholder receives a price equivalent to the highest bid. The requirement typically becomes effective when five to twenty percent of all outstanding shares are obtained by an uninvited acquirer. The objective of this amendment is to prevent hostile two-tier tender offers. The fair price amendment has effectively discouraged two-tier offers without significantly reducing the likelihood of a takeover attempt.<sup>6)</sup>

The classified board amendment divides the board of directors into three groups of equal size so that only one third of all directors are elected each year. Staggering makes it more difficult to change the composition of the board, therefore making it more difficult for any insurgent shareholder or group to gain control of the firm. Since tender offers do not need board approval, this amendment will not decrease the probability of an initial bid and increases the cost to the bidder.

## Poison Pills

A controversial but popular defense mechanism against hostile takeover bids is the creation of securities called poison pills. These securities provide their holders with special rights exercisable at a specified time after a certain event, such as a tender offer for control or the accumulation of a specified percentage of target shares. These rights take several forms but all make it difficult or costly to acquire control of the target firm.

Poison pills can be adopted by the board of directors without shareholder approval.

Usually the rights provided by a poison pill plan can be altered quickly by the board or redeemed by the firm at a prespecified low cost any time before they become exercisable following a certain event. These provisions force the bidder to negotiate directly with the target's board and allow some takeover bids to go through. Poison pills deter takeovers by making acqui-

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3) 4) A supermajority provision is the provision that requires approval by shareholders of at least two-thirds (and sometimes as much as 90%) or the voting power of the outstanding shares.

5) A board-out clause is the clause that the board is able to determine when and if the supermajority provisions will be in effect.

6) See Jarrell and Poulsen (1987).

7) See Malatesta and Walking (1988).

sition of the target firm extremely costly to the bidder.<sup>7)</sup> Malatesta and Walking(1988) and Ryn-gaert(1988) identify and characterize five main types of poison plans.

a) Preferred Stock Plans: In the plan, the firm issues a dividend of convertible preferred stock to its common shareholders. Holders of the preferred stock are entitled to one vote per share and to dividends somewhat higher than the amount of common dividends that would be received after conversion. The firm is allowed to redeem the preferred stock only after a lengthy period. In the event that an outside party acquires a large block of the firm's voting stock, the holder of the preferred stock can exercise special rights. First, preferred stockholders other than the large block holder can require the firm to redeem preferred stock for cash at the highest price the large block holder paid for the firm's common or preferred stock during the past year. Second, if the acquiring party merges with the firm, the preferred stock can be converted into voting securities of the merged firm at or above the redemption value.

b) Flip-Over Plans: In this plan, shareholders receive a common stock dividend in the form of rights to acquire the firm's common or preferred stock at an exercise price well above the current market price, and if a merger occurs, the rights "flip over" to permit the holder to purchase the acquirer's shares at a substantial discount, usually 50 percent.

Usually having a term of ten years, the rights become exercisable ten days after a person or a group either acquires at least 20 percent, or commences a tender offer for at least 30 percent of the firm's common stock. When they become exercisable, the rights are separated from the stock and can be traded independently. Before they become exercisable, the rights can be redeemed by the firm's board at a trivial cost.

c) Ownership Flip-In Plans: An ownership flip-in plan provision allows shareholders, excluding the acquirer, to purchase shares in the target firm at a substantial discount if a bidder accumulates target shares in excess of a threshold. The provision dilutes the bidder's equity ownership in the target firm. Some plans waive the flip-in provision if a cash tender offer is made for all outstanding shares.

d) Back-End Rights Plans: Under these plans, shareholders, excluding the acquirer, receive a rights dividend that allows them to exchange a right and a share of stock for senior securities or cash equal in value to a back-end price set by the board of the target firm. The back-end price is higher than the stock's market price and thus back-end plans set a minimum takeover price for the firm. A tender offer for less than the back-end price will not succeed because rights holders have

an incentive to hold out for the higher backend price.

e) Voting Plans: A voting plan declares a dividend of preferred stock with voting rights. In the event of an unsolicited takeover, preferred stock holders other than the large blockholders become entitled to supervoting privileges or long-term holders of preferred stock are entitled to more votes per share than short-term holders.

The former makes it difficult for the blockholder to obtain voting control and the latter makes it difficult for a bidder to acquire voting control rapidly.

### III. Hypotheses

Previous studies document that the share price response surrounding the announcement of anti-takeover techniques is different for various takeover defenses. The differences in the share price responses may result from different effects of various takeover defenses on the probability of a bid or success of the offer, cost to the bidder, or preventing or encouraging an auction. Consequently, ex-post, we can express the share price response (CAR) as a function of the type of antitakeover technique:

$$CAR = f(\text{Type of antitakeover technique}) \quad (1)$$

A negative CAR supports the management entrenchment hypothesis and is consistent with antitakeover techniques that reduce the probability of a successful offer or an auction and increase the cost to the bidder. A positive zero CAR supports the alignment hypothesis and should be observed with defenses that increase the bid premium without substantially reducing the probability of the success of a tender offer.

Wealth effects for managers may play a role in influencing the manager's selection of the type of antitakeover technique.

$$TYPE = g(\text{Wealth effects for managers}) \quad (2)$$

Insider ownership (INSD) or the existence of golden parachutes (GP) reflect one of wealth effects for managers. We can rewrite (2) with the above two explanatory variables as follows:

$$TYPE = g(\text{INSD or GP}) \quad (2)$$

Following hypotheses are developed from the above discussion.

Table 1. Independent variables and expected signs in multinomial logistic regression.

Multinomial logistic regression: Type=g(INSD or GP)

Hypothesis	Independent variables	Relationship between independent variable and the adoption of the most harmful technique
(2)	Insider ownership	negative
(3)	Golden parachute	negative

**Hypothesis 1:** The announcement of proposals for antitakeover amendments or poison pills should receive negative(positive) share price response, on average, if the manager's motive is to entrench(align).

We anticipate that techniques that 1) lower the probability of initial bid or tender offer success, 2) increase the cost to the bidder, or 3) prevent an auction receive more negative responses. Also techniques that require shareholder approval should receive higher responses than unilaterally implemented techniques.

**Hypothesis 2:** Managers choose the most harmful antitakeover techniques when insider ownership is low.

Jensen and Meckling(1976) suggest that both incentive compensation, in the form of stock and stock options, and monitoring influence managerial behavior. In the context of a tender offer, managers with large shareholding are less likely to resist desirable bids.

The share price response to antitakeover techniques should then be positively related to insider ownership. Alternatively, managers can use their voting rights to decrease the likelihood of hostile takeover by increasing the cost to the bidder. Stulz(1988) argues that managers primarily value fixed compensation and perquisites and utilize their voting rights to block tender offers. This implies that the share price response to antitakeover techniques is negatively related to insider ownership. Jarrell and Poulsen(1978) report that a negative relationship between stock returns and insider holdings exists. However, Agrawal and Mandelker(1990) do not find a significant relationship between shareholder wealth and insider ownership. McWilliams(1990) reports that the relation between the amendment proposal effect and insider ownership is significantly negative for all amendment types except the fair price amendment.

**Hypothesis 3:** Managers choose the most harmful antitakeover techniques when golden parachutes do not exist.



A golden parachute is a payment to target managers conditional upon a change in control of the target firm. Golden parachutes attempt to eliminate agency problems between target managers and shareholders. Lambert and Larcker(1985) suggest that share price response is positive to the adoption of golden parachutes. The existence of a golden parachute in a firm may influence managers' action in takeover events. Evans(1990) argues that, although the manager's bargaining power may be enhanced by the adoption of antitakeover techniques, the desire to resist a tender offer is a function of managerial compensation structure, specifically the dollar value of a golden parachute. A manager with a larger dollar value of a golden parachute is less likely to reject an adequate tender offer. Thus, the share price response to antitakeover techniques is positively related to the existence of a golden parachute.

## IV. Data

Our sample of firms proposing poison pill, classified board, or fair price amendments is derived from the Investor Responsibility Research Center(IRRC).<sup>8)</sup> The IRRC 1990 volume provided extensive lists of firms that proposed at least one of the techniques. This paper focuses on firms that adopted poison pills, classified board, or fair price amendment during 1980-1989. The announcement dates for classified board and fair price amendments are obtained from the proxy statement. Consistent with Malatesta and Walkling(1988), the poison pill announcements date is obtained from the wall street Journal. Prior studies do not isolate manager's motives for adopting individual anticipatory defensive tactics. For example, Jarrell and Poulsen(1987) classify a firm in the fair price category whether or not it simultaneously proposed a classified board or poison pill. Bhagat and Jefferis(1991) include firms that either adopted classified board or fair price amendments. Instead, we focus on firms that only proposed one defensive technique and had no other pre-existing amendments. Since different amendments vary in their provisions, it is important to distinguish between their relative effects independent of each other.

A matched sample of firms that did not propose poison pill, classified board or fair price amendments is constructed. The firm closest in total equity value and three-digit SIC industry

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8) The IRRC published a publication titled Corporate Takeover Defenses in 1990. The 1990 volume has information on 1500 companies that account for more than 93 percent of the total capitalization of the New York Stock Exchange, American Stock Exchange, and NASDAQ listings as of August 1990.

code to a firm proposing a technique is selected from the Center for Research and Security Prices (CRSP) daily master file. For each firm in the matched sample, we locate the proxy statement closest to the mailing date of the corresponding firm which adopted an antitakeover technique.

Insider holdings data are obtained from the chosen proxy statement. Insiders are officers, affiliated directors and related individuals. Total equity interest is calculated using beneficial ownership of common or common shares. Beneficial ownership includes direct ownership, indirect ownership through family members, trusts and contingent ownership. Beneficial ownership of officers and directors as a group is corrected to eliminate double counting. The existence of golden parachutes is identified from the proxy statements of the sample firms. The variable is a categorical variable and equal to 1 if a firm has a golden parachute and 0 if otherwise.

Firms are excluded for several reasons: Daily common stock returns are not available on the CRSP daily master file. Extraordinary firm specific events such as takeover attempts occurred within 10 days surrounding the announcement. Finally, regulated firms are excluded.

Final sample has four mutually exclusive categories: (1) 54 firms that only adopted a poison pill and did not have any other type of technique at the adoption date, (2) 44 firms that only adopted classified board amendments, (3) 58 firms that only adopted fair price amendments, and (4) a matched sample of 156 firms selected by size and industry that did not have any of the above.

## V. Methodology

This study uses two empirical methodologies: event study methodology and multinomial logistic regression. First, standard event study methodology is used to determine the abnormal stock returns surrounding the announcement date of the adoption of antitakeover techniques. Second, multinomial logit analysis is used to examine whether systematic relations exist between the explanatory variables and the type of takeover defenses selected before a takeover bid.

### Event Study Methodology

Event study methodology in this study draws heavily on work by Dodd and Warner (1983), Brown and Warner (1985), and Linn and McConnell (1983). To determine the abnormal performance around the news release date, market model parameters are estimated for each security  $j$ .

The estimation period for market model parameters runs from 200 days to 90 days prior to the announcement date. The event period is defined as 1 day before announcement through 1 day after announcement date. The proxy mailing date is used as an announcement date for anti-takeover amendments while first appearance on WSJI is used as an announcement date for poison pills.

The market model will be used:

$$\tilde{R}_{j,t} = a_{j,t} + b_{j,t} \tilde{R}_{m,t} + \tilde{e}_{j,t} \quad t = -200 \text{ to } -90$$

where

$\tilde{R}_{j,t}$  = return on day t to firm security j

$\tilde{R}_{m,t}$  = return on day t to market

$a_j, b_j$  = regression coefficients

$\tilde{e}_{j,t}$  = error term

Abnormal return for security j on day t in the event period is calculated as the prediction error from the market model:

$$AR_{j,t} = R_{j,t} - (\hat{a}_j + \hat{b}_j R_{m,t})$$

where

$(\hat{a}_j + \hat{b}_j)$  = estimated regression coefficients from the market model

An equally-weighted average of individual securities' abnormal returns for event day t is calculated:

$$AR_t = (\sum_{j=1}^N AR_{j,t}) / N$$

Cumulative average abnormal retrun over k days is simply an average of the  $AR_t$  over the period in question:

$$CAR_k = (\sum_{t=1}^k AR_t)$$

To determine the statistical significance of the average abnormal returns during the event period, standardized test statistics are constructed. Each abnormal return is divided by the square root of its estimated forecast variance, forming a standardized abnormal return:

$$SAR_{j,t} = AR_{j,t} / S_{j,t}$$

where

$$S_{j,t} = [s_j^2 (1 + 1/T(R_{m,t} - R_m)^2 / \sum_{r=1}^T (R_{m,r} - R_m)^2)]^{1/2}$$

$s_j^2$  = residual variance from the OLS estimation of the market model for security j.

T = number of estimation period observation

$R_{m,t}$  = return on market for day t of the estimation period

$R_m$  = average return on market over the estimation period

N = number of securities

$$Z_{SAR_t} = (1/N) \sum_{j=1}^N SAR_{j,t} / ((T-2) / (N(T-4)))^{1/2}$$

and for cumulative k day performance,

$$Z_{CSAR_t} = (1/N) \sum_{j=1}^N CSAR_{j,t} / ((T-2) / (N(T-4)))^{1/2}$$

where

$$CSAR_{j,t} = \sum_{j=1}^N [SAR_{j,t} / Q]^{1/2}$$

Q = number of trading days by the interval -1 to t.

The Z-statistic for  $SAR_t$  and  $CSAR_t$  is distributed approximately unit normal for large N.

## Multinomial Logistic Statistical Analysis

Multinomial logistic analysis is used to examine the impact of explanatory variables on the probability that a firm selects each of different types of antitakeover defenses before a takeover attempt. Our sample is classified into four categories which consists of poison pills, classified board amendments, fair price amendments, and nonadopting firms.

A multinomial logit regression is conducted to estimate coefficients of our logistic model for the sample. The dependent variable in this analysis is 1, 2, 3, and 4 indicating poison pills, classified board amendments, fair price amendments, and non-adopting firms respectively. All firms will select one of  $J=4$  categories. Each firm's selection is predicted by explanatory variables, designated by INSD or Defining  $P_j$  as the probability that a given firm will eventually select category J, the multinomial logit model postulates that  $p_j$ 's of the firm can be estimated as follows:

$$Z_j = b_{j1}(INSD_i \text{ or } GP_i) + b_{j0}$$

for each type  $j=1, 2, 3, 4$

$$P_j = \exp(Z_j) / \sum_{j=1}^4 \exp(Z_j)$$

where

INSD<sub>i</sub> = the percentage of stock owned by insiders on firm  $i$ ,

GPI = golden parachute on firm  $i$

$Z_j$  is the  $\log(P_j/P_4)$  and  $P_j$  is a firm's probability of selecting type  $j$  where  $j=1, 2, \text{ or } 3$ .

The coefficients  $b_{j1}$  can be considered as the effect of each explanatory variable on a firm's probability of selecting type  $j$ . In this paper, we determine the effect of each explanatory variable on choosing different antitakeover techniques by examining the coefficient of each variable in our model. For example,  $b_{j1}$  is a measure of how much more likely or unlikely for a firm to be in a specific category when GP is for a firm to be in a specific category when GP is equal to 1 or 0. If a coefficient is positive (negative), a firm is more (less) likely to adopt a specific technique rather than take no action when a manager has a pre-existing golden parachute.

The following section presents the empirical findings.

## VI. Empirical Results

### Summary statistics

Table 2 summarizes the difference in insider ownership and golden parachute incidence for the proposing and nonproposing samples and reports the results of pairwise tests.

Both the officers, affiliated directors, and related individuals as a group own a greater percentage of total shares outstanding (the mean and median values are 20.97% and 14.51% respectively) at the nonproposing firms. Insider ownership on average decreases as the type of antitakeover techniques more harmful. Mean (median) values for poison pills, classified board amendments, and fair price amendments firms are 7.16% (3.72), 10.01% (5.27), and 10.05% (4.61) respectively.

Agency theory suggests that firms with low insider ownership should provide golden parachutes to protect executives from potential wealth loss in the event of a successful takeover. If golden parachutes are effective contracting mechanisms, we expect managers of firms providing a golden parachute not to adopt anticipatory defenses that deter potential bidders by substantially increasing cost. The results are contrary to traditional views. Fifty percent (mean and median val-

Table 2. Summary statistics for insider ownership variable and the existence of golden parachute by type of antitakeover technique and a sample of nonadopting firms.

Panel I The mean and median value of variables for sample firms proposing anti takeover techniques and nonproposing firms, in the period 1/1/1980 to 12/31 1989.

All data are from the Proxy Statement of sample firms. All firms in the proposing sample adopted only one of the three techniques listed in the proxy statement over the sample period.

Type	INSD (%)		GP (categorical)	
	MEAN	MED	MEAN	MED
Poison pill	7.16	3.72	0.50	0.50
Classified-board amendments	10.01	5.27	0.30	0.00
Fair-price amendments	10.05	4.16	0.17	0.00
Nonadopting	20.97	14.51	0.10	0.00

\*INSD=Insider ownership including management and board of directors.

GP=Golden parachutes

<sup>b</sup>Significant at the 0.05 level.

Panel II . Difference between means and pairwise parametric tests indicating whether the mean are different at 5% level or betterb.

	INSD. (%)	GP
Poison Pill-Classified Board	-2.85	0.2046b
Poison Pill-Fair Price	-2.89	0.3276b
Poison Pill-Nonadopting	-13.81b	0.3974b
Classified Board-Fair Price	-0.04	0.1230
Classified Board-Nonadopting	-10.96b	0.1929b
Fair Price-Nonadopting	-10.92b	0.0699

\*INSD=Insider ownership including management and board of directors.

GP=Golden parachutes

<sup>b</sup>Significant at the 0.05 level.

ues) of the firms choosing poison pills had preexisting golden parachutes. On the other hand, the median value for firms in the classified board, fair price amendment and nonadopting samples is zero. Furthermore, mean frequency for the classified board, fair price, and non-proposing samples are 30%, 17%, and 10% respectively. Therefore, golden parachutes are detrimental because man-

Table 3. Announcement returns realized by sample firms offering antitakeover techniques during the period 01/01/80 through 12/31/89 and nonadopting firms. Day 0 is the proxy mailing date for classified board or fair price amendments and the announcement date in the Wall Street Journal for poison pills. The CRSP equally weighted index is the market index. Each firm adopted only one type of antitakeover technique. Nonproposing firms do not propose any technique during sample period and are selected on the basis of size and industry. Z statistics are constructed using standardized returns(see Dodd and Warner, 1983).

Portfolio	Announcement returns for days [-1, 1]				Sample Number	
	Mean	Median	Standard deviation	z-statistic	size	positive
Poison pill	-0.0078	-0.0075	0.0259	-1.5084	54	23 <sup>b</sup>
Classified board amendment	0.0019	-0.0008	0.0226	-0.4728	44	10
Fair price amendment	0.0042	0.0022	0.0253	0.4916	58	31
Nonproposing	-0.0006	-0.0032	0.0727	0.5055	156	69

  

Portfolio	Announcement returns for days [-5, 0]				Sample Number	
	Mean	Median	Standard deviation	z-statistic	size	positive
Poison pill	-0.0131	-0.0099	0.0510	-1.8197a	54	21 <sup>b</sup>
Classified board amendment	-0.0063	-0.0107	0.0526	-0.5101	44	17
Fair price amendment	-0.0042	-0.0047	0.0517	-1.0416	58	27
Nonproposing	-0.0050	-0.0111	0.0893	-0.2461	156	68

<sup>a</sup>significant at the 0.10 level.

<sup>b</sup>significant at the 0.05 level by using a sign test.

agers are not discouraged from making shareholder wealth decreasing decisions.

### Empirical Evidence

Announcement returns are presented in Table 3. We focus on the day before and the day after the proxy mailing date for charter amendments, the announcement in the WSJ for poison pills, and the matching date for nonadopting firms. Calculations are based on the market model, with the

9) Bhagat and Jeffries(1992) find that the results from the CRSP equally-weighted index and Standard & Poors composite index are indistinguishable.

Table 4. Estimated coefficients from multinomial logit regressions relating the choice of antitakeover techniques and variables in the period 01/01/80 through 12/31/89(number of observations=312).

Regressions		Estimated Coefficient (chi-squared statistic in parentheses)	Intercept
Y=a+b(INSD)	Log(P1/P4)	-0.0685c (17.51)	-0.2229 (1.05)
	Log(P2/P4)	-0.0425c (9.93)	-0.6473 (7.78)
	Log(P3/P4)	-0.0422c (12.44)	-0.3736 (3.13)
	Model chi-squared statistic=30.71		
Y=a+b(GP)	Log(P1/P4)	2.1691c (32.74)	-1.6458 (61.31)
	Log(P2/P4)	1.3000c (9.45)	-1.5077 (57.69)
	Log(P3/P4)	0.6004 (1.89)	-1.0704 (40.96)
	Model chi-squared statistic=34.94		

<sup>a</sup>Significant at the 0.10 level

<sup>b</sup>Significant at the 0.05 level

<sup>c</sup>Significant at the 0.01 level

<sup>d</sup>Y=1 if a firm adopts Poison pills;

2 if a firm adopts Classified-board amendments;

3 if a firm adopts fair-price amendments;

4 if a firm adopts no antitakeover technique.

CRSP equally-weighted index serving as the market proxy and days-200 to-90 relative to the event date used for estimation.<sup>9)</sup> The wealth effects associated with classified board amendments, fair price amendments, and the nonadopting sample are small and insignificant. However, the wealth effect of poison pill is significantly negative. The results using different windows are similar. In contrast to Bhagat and Jefferis(1992), the portfolio of nonadopting firms realizes a negative announcement return that is insignificantly different from zero. This result is consistent with Brickley's(1986) finding that classified board and fair price firms do not reduce shareholder wealth. Our wealth effects are possibly subject to selection bias discussed in Bhagat and Jefferis(1991). They argue that announcement effects of antitakeover amendments provide a biased estimate of the wealth effects associated with the enactment of an amendment when market par-



ticipants understand the link between the likelihood of enactment and ownership structure.

Table 4 presents two logistic regressions that provide an assessment of the influence of the influence of insider ownership or golden parachute incidence on the type of anticipatory antitakeover technique selected. Regressions are multinomial logistic regressions that compare the likelihood of adopting each type of technique to the nonproposing group. Table 4 reports the impact of each explanatory variable on choosing the type of antitakeover techniques.

### 1) Insider ownership

We find that insider ownership has explanatory power for the selection of different types of antitakeover techniques. That is, increased voting power by corporate officers and inside board of directors reduces the likelihood that share holders will receive poison pills, classified board amendments, or fair price amendments. Table 4 shows that coefficients for insider ownership are significantly negative for all antitakeover measures.

The most negative coefficient is for poison. Thus, firms with higher insider ownership are least likely to adopt poison pills. The coefficients of classified board and fair price amendments are less negative than that of poison pills. Still, firms with more insider ownership are less likely to adopt classified board amendments or fair price amendments.

Our results are consistent with Bhagat and Jefferis(1991). They show that insider ownership is a deterrent to classified board and fair price amendments adoption.

### 2) Golden Parachutes

Knoeber(1986) argues that golden parachutes protect managers against shareholder opportunism. The optimal contract delays payment until accurate information concerning performance can be obtained. Deferred compensation, however, creates a moral hazard problem because shareholders can renege on the deferred payment by accepting a tender offer. Thus, golden parachutes are insurance against this outcome and should encourage managers not to erect barriers against potential takeovers. To the contrary, we find that firms with pre-existing golden parachutes are more likely to adopt poison pills or classified board amendments. Table 4 shows that the coefficients for the pre-existence of golden parachutes are significantly positive only for poison pills and classified board amendments. Consequently, golden parachutes are inefficient contracting mechanisms and further insulate managers from the market for corporate control.

## VII. Conclusion

This paper presents evidence that managers' wealth effects influence the type of anticipatory antitakeover amendments chosen. In this study, we suppose that insider ownership or the existence of golden parachutes reflects one of wealth effects for managers. Insider stock ownership as well as golden parachutes can align managers' and shareholders' interest.

The major findings in this paper are:

- (1) Poison pills entrench managers: share price responses are significantly negative. Classified board amendments and fair price amendments do not appear to entrench managers: share price effects are insignificant.
- (2) Firms with lower insider ownership are more likely to adopt poison pills, classified board amendments, or fair price amendments instead of taking no anticipatory antitakeover measure.
- (3) Firms with pre-existing golden parachutes are more likely to adopt poison pills or classified board amendments instead of adopting fair price amendments or taking no anticipatory antitakeover measure.

Our findings suggest that insider ownership effectively align managers' and shareholders' interests. The presence of golden parachutes does not discourage managers from proposing the most harmful antitakeover techniques. Thus, golden parachutes are ineffective contracting mechanisms. This result is surprising. Instead of aligning managers' and shareholders' interests, these contracts are provided as safety valve in case the defense is ineffective. Our result is consistent with the hypothesis that golden parachutes increase the expectation of tender offers but do not reduce agency problems.

If our interpretation is correct, disallowing golden parachutes benefits shareholders.

Our major contribution is the finding that insider ownership and golden parachutes influence the choice of antitakeover measure selected. The multinomial logistic model shows that insider ownership and the incidence of golden parachutes can predict whether a poison pill or classified board amendments are likely adopted. A limitation is that the wealth effects of antitakeover techniques adoption must be interpreted with caution because of the selection bias argued by Bhagat and Jefferis

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