

WHAT DO LARGE SHAREHOLDERS DO?

by

David A. Butz

Working Paper No. 613
Department of Economics
University of California, Los Angeles
March 1991

WHAT DO LARGE SHAREHOLDERS DO?

David A. Butz
Department of Economics
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, California 90024
(213) 825-6838

First Draft: August 28, 1990
Current Draft: February 1, 1991

*I am grateful to Harold Demsetz, Andrew Dick, Bill Gale, David Hirshleifer, Tim Opler, Steve Pastrel, Harold Summers, and Michael Waldman for helpful comments. All errors are my own.

ABSTRACT

This paper models a large shareholder with a credible takeover threat. Management recognizes that this shareholder has more to gain from a takeover when it owns 30% of the firm than when it owns 20% and that to preempt a takeover it must therefore make more concessions in the former case than in the latter. The large shareholder recognizes that by raising its stake from 20% to 30% it can wrest more concessions from management. In comparison to earlier work where ownership stakes have no bearing on managerial concessions, large shareholders here have greater incentives to monitor the firm, purchase shares, and resolve their differences with management without dismissing them and without resort to costly takeovers. Outsiders also have greater incentives to monitor the firm and purchase foothold stakes.

I. INTRODUCTION

As Adolf Berle and Gardiner Means (1933) explained over a half-century ago, diffuse ownership in modern corporations can provide management with broad discretion to pursue ends other than value maximization. Even though the economics literature has recognized for some time that ownership is not especially diffuse — large shareholders are prevalent in even the biggest corporations,¹ — Berle and Means' fears have not been put to rest. On the contrary, their hypothesis has taken a disturbing twist. Some economists, especially in recent years, have gathered evidence that managers often have the means at their disposal to thwart traditional means of control, and that consequently ownership and control often remain separate even among corporations with large minority shareholders. Corporate boards are portrayed as largely ineffective, incentive contracts establish only weak links between managerial pay and performance, managerial turnover is low even in firms that have fared poorly, and proxy contests are expensive and rarely successful. Finally, hostile takeovers, shareholders' last defense against managerial shirking, suffer from serious free rider problems and a host of defenses, some of which can be devastatingly effective.

This paper argues that these dire descriptions are overstated precisely because the evidence ignores the ongoing control large shareholders wield. It shows that large shareholders can employ takeover threats to empower themselves with considerable ongoing influence; it shows how they can profitably bolster their influence by raising their stakes; it shows that in the absence of private information the ongoing control arising from takeover threats should overshadow actual takeovers (and hence that takeovers arise first and foremost because of asymmetric information); and it shows that even where disclosure rules make it impossible for an outside investor to buy a foothold

stake and mount a profitable takeover, this investor can profit if it acquires a foothold, buys additional shares openly, and then wields a takeover threat.

This paper makes its case by making two changes in a model by Andrei Shleifer and Robert Vishny (1986). First, it alters the way management responds to large shareholders. Shleifer and Vishny assume that the size of a large shareholder's ownership stake has no bearing on the concessions it can wrest from management. In practice, however, a shareholder with a 30% stake has more to gain from a takeover than one with a 20% stake, so even if both have a credible threat, to preempt a takeover management must make more concessions to the former shareholder than to the latter. The implication from Shleifer and Vishny's model is that managers are often unaware of or cannot respond adequately to takeover threats. They may agree to make any improvements they can, but they can do only a fraction of what the large shareholder can do. Here, in contrast, management makes concessions only in proportion to the perceived threat, so concessions vary with large shareholders' ownership stakes. This framework applies where management is competent (if only to the extent that it can sell underperforming assets) but entrenched.

Second, this paper assumes that once a large shareholder has monitored the firm it can credibly disclose its findings. With perfect information at the post-monitoring stage, large shareholders and management always resolve their differences without resort to costly control contests. More important, because of this modification large shareholders also have clear incentives to raise their ownership stakes. Though they do not profit directly on the shares they buy — small shareholders price their shares knowing that large shareholders' higher ownership stakes will generate additional managerial concessions — the purchases raise the value of the shares they already own.

Once monitoring has been completed, large shareholders always gain by purchasing more shares and an outsider who has sunk all monitoring costs always finds it profitable to establish a foothold stake as long as some secret trading is allowed. Moreover, Section V argues that these trading incentives may remain even if the large shareholder cannot credibly disclose the value of the improvements it discovers.

The next section surveys the literature. The model is outlined in Sections III and IV. Section V discusses the ramifications of asymmetric information. Section VI elaborates on the results and a conclusion follows.

II. THE NEW BERLE AND MEANS HYPOTHESIS

Though many economists have voiced doubts about the effectiveness of managerial controls, perhaps none are as prominent and outspoken as Shleifer and Vishny (1986,1988). They consider a variety of internal controls and conclude that though each may have some relevance in specific settings, "in sum, internal control devices are not especially effective in forcing managers to abstain from non-value-maximizing conduct (1988 p. 10)." This section surveys their arguments and adds additional evidence for their viewpoint.

For many reasons Shleifer and Vishny discount the role of boards of directors, the most obvious channel through which shareholders might wield influence. In practice, they say, CEOs control the selection of directors and choose board members who are loyal insiders, outsiders with an interest in the status quo, or relatively independent directors who can be coopted. Even those disposed to challenge management typically lack the knowledge and incentives to do so. In addition, management can take measures to make it difficult for the board to reverse its decisions and can rely on the business judgement rule to block legal actions against managers' or directors' improprieties. Finally,

though the board could index managerial compensation to firm performance, a variety of factors make this difficult.

Shleifer and Vishny also downplay any direct role for large shareholders. In their model a large shareholder (hereafter L) can invest in monitoring activities that would raise the firm's value following a takeover but not otherwise. Only L knows the firm's post-takeover value. They argue that L rarely makes pre-tender offer stock purchases unless it can do so secretly. They reason that if shareholders observe L trying to buy shares, they draw inferences that make them reluctant to sell. For instance, if L tries to buy after monitoring the firm — and after learning its true value — small shareholders infer that the firm's value would rise dramatically following a takeover and therefore refuse to sell except at a price that reflects the firm's post-takeover value. But at this price L finds such a purchase unprofitable.

Given strict disclosure rules the authors identify only one case (discussed later) where L would ever adjust its ownership stake. They outline a corporate life-cycle story "in which firms are initially closely held and become less so as they grow and require more capital (1986 p.477)." A large block of shares is not likely to be dissipated, they say, but growth accompanied by the sale of outside equity results in an irreversible process toward ever greater separation of ownership and control. And in the absence of secret trading, new large shareholders will not emerge.

Shleifer and Vishny mention the role large shareholders' takeover threats can play, saying that in some companies managers "have beaten potential acquirers to the punch by taking on more debt and selling off divisions to escape a hostile bid or deter one (1988 p.13)." But they immediately go on to say that

While some managers responded to the threat of a hostile bid by implementing the very changes sought by raiders, other managers only dug in deeper. For example, many managers changed their corporate charters in a way that makes them virtually invulnerable to any control challenge, whether through a takeover or through the proxy mechanism. Many state laws have also been rewritten to favor incumbent management. While non-value-maximizing behavior declined in some companies, in others such behavior became even harder to penalize. (1988 p.13)

Nor do large shareholders' informal negotiations ("jawboning") with incumbent management have much impact. They argue that this mechanism will be used only to make less valuable improvements and claim that "while jawboning is less costly than making a tender offer, we suspect that it is also a much less effective means of improving the firm's operating strategy (1986 p.472-473)." Furthermore, because jawboning makes tender offers more difficult,² they conclude that shareholders might try to commit not to participate. On similar grounds they also deny the importance of proxy contests: "That we observe successful takeover bids implies either that the proxy mechanism is very costly to operate or that it is not an effective means of obtaining the full value of an improvement (1986 p.472)."

Shleifer and Vishny are singled out only because their work has the most immediate bearing on the model that unfolds here. Others express similar concerns and Shleifer and Vishny's comments in some cases simply echo their findings. They cite work by Manne (1965) and Dodd and Warner (1983) to corroborate their own arguments on proxy fights, and their conclusions about boards of directors draw upon results described in Warner, Watts, and Wruck (1988) and Weisbach (1988). Much other work also questions the effectiveness of internal controls, including Benston (1985), Coughlan and Schmidt (1985), Jensen and Murphy (1990), Johnson, Magee, Nagarajan, and Newman (1985), Morck, Shleifer, and Vishny (1989), Murphy (1985), Vancil (1987), and Walsh (1988).

With two modifications to the Shleifer and Vishny framework — management grants concessions only in proportion to the takeover threat and large shareholders can credibly disclose the improvements they find — the next two sections demonstrate why these conclusions are premature. These results have important implications for many facets of the firm, including the evolution of large shareholders' ownership stakes, the emergence of new large shareholders, the role of corporate boards, the removal of shirking management, the impact of disclosure rules, and monitoring incentives.

III. THE MODEL

A firm has assets that under the status quo will generate expected discounted profits of q_0 . Let $V^* \geq q_0$ denote the firm's expected post-takeover value and assume that even if management is not competent to run the firm it can raise its value by any amount up to V^* by selling assets. Let $Z = V^* - q_0$ and let β represent the fraction of all improvements management undertakes. As such, with no takeover the firm's final value is $q = q_0 + \beta Z$. Management maximizes utility, $U(q)$, where $q_0 = \operatorname{argmax} U(q)$ and $U'(q) < 0$ for all $q > q_0$. Consequently, management makes whatever changes it must to preempt a takeover but otherwise maintains the status quo.

Atomistic shareholders own a fraction $1 - \alpha$ of the firm's equity and a single large shareholder, L , owns α . L maximizes wealth and can take control by purchasing a majority of the firm's shares. Let C denote takeover costs. Let $q_0 + \pi$ be the firm's value as reflected in any takeover bid. Thus π equals small shareholders' takeover gains relative to the initial status quo.

As illustrated in Figure 1, suppose L monitors the firm, learns Z and discloses it publicly.³ At this point all information is public and all monitoring costs sunk. Management then chooses β and L either accepts the out-

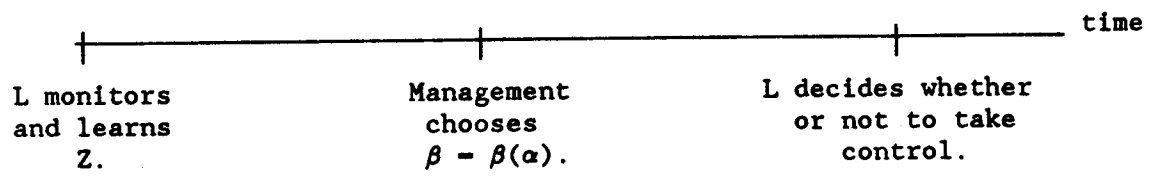


FIGURE 1

come or takes control. If L does not take control, managerial utility equals $U(q)$ and L's wealth is $\alpha q = \alpha(q_0 + \beta Z)$. If L takes control, managerial utility equals $U(V^*)$ and L's wealth is $.5V^* - (.5 - \alpha)(q_0 + \pi) - C$. Hence, L takes control if and only if $.5V^* - (.5 - \alpha)(q_0 + \pi) - C > \alpha q$. This gives a takeover condition equivalent to Shleifer and Vishny's (1986 p.466):⁴

$$(1) \quad .5Z - (.5 - \alpha)\pi - C > \alpha\beta Z.$$

With perfect information small shareholders refuse to tender their shares for less than their post-takeover value (Grossman and Hart 1980), so $\pi = Z$. Substituting this into (1) and solving for β gives a critical value:

$$(2) \quad \beta^* = \beta^*(\alpha, Z) = 1 - \frac{C}{\alpha Z}.$$

If $\beta < \beta^*$, then L takes control; otherwise L makes no offer. It follows that $\partial\beta^*/\partial\alpha > 0$, $\partial\beta^*/\partial Z > 0$, and $\partial\beta^*/\partial C > 0$: to avoid a takeover management must make more concessions the larger is L's ownership stake, the more significant the improvements L could make, and the lower L's takeover costs. Let $\alpha_{\min} = C/Z$, so that $\beta^*(\alpha_{\min}, Z) = 0$. Hence, L has a credible takeover threat if and only if $\alpha > \alpha_{\min}$. Alternately, let $Z_{\min} = Z_{\min}(\alpha) = C/\alpha$, so that $\beta^*(\alpha, Z_{\min}) = 0$. Hence, given its ownership stake, L has a credible takeover threat if and only if $Z > Z_{\min}$. Management recognizes any threat, however, and since $U(V^*) < U(q)$ for all $q < V^*$, in equilibrium it chooses $\beta = \beta^*$ and L makes no bid for control.

Managerial concessions also arise in Shleifer and Vishny's framework. In their model, however, the size of L's ownership stake has no bearing on the changes management makes ($\partial\beta/\partial\alpha = 0$). Management makes any changes it can, but can do only a fraction of what L can do. If $\beta > \beta^*$, management concedes more than is necessary; if $\beta \leq \beta^*$, it concedes too little and L

takes control. Holding β fixed, therefore, a takeover occurs when L has a large stake (i.e., $\alpha > \alpha_{\min}$) or when the improvement is large ($Z > Z_{\min}$).

The rest of this section shows how shareholders who have completed their monitoring efforts can raise their stakes and thereby increase their influence. It begins with large shareholders who have discovered improvements that give them credible takeover threats. It then considers large shareholders who have not found improvements substantial enough to pose a threat and concludes with an analysis of outside investors' incentives to purchase foothold stakes.

A. Post-Monitoring/Pretakeover Trades by the Large Shareholder

Since management sets $\beta = \beta^*$, L can raise its stake and force management to make changes that it would not adopt otherwise. As illustrated in Figure 2A, suppose L begins with a stake of $\alpha_0 > \alpha_{\min}$ and raises it to α_1 . Let $V_m = V_m(\alpha_0, \alpha_1)$ be the firm's market value as reflected in the price of the shares purchased. Let W_0 denote L's initial wealth and let W_1 represent L's wealth after it raises its stake to α_1 . Then

$$(3) \quad W_0 = \alpha_0[q_0 + \beta^*(\alpha_0, Z)Z] - \alpha_0 V^* - C \quad \text{and}$$

$$(4) \quad W_1 = \alpha_1[q_0 + \beta^*(\alpha_1, Z)Z] - (\alpha_1 - \alpha_0)V_m - \alpha_1 V^* - (\alpha_1 - \alpha_0)V_m - C.$$

Subtracting (3) from (4) gives

$$(5) \quad W_1 - W_0 = (\alpha_1 - \alpha_0)(V^* - V_m) \geq 0.$$

If L cannot take control of the firm through repeated secondary market purchases, then $V^* > V_m$ and $W_1 > W_0$. Thus, we have the paper's first result.

Proposition 1: Suppose L can disclose all potential improvements and cannot take control by buying shares in the secondary market. Then if L has a credible takeover threat, it always gains from a share purchase.

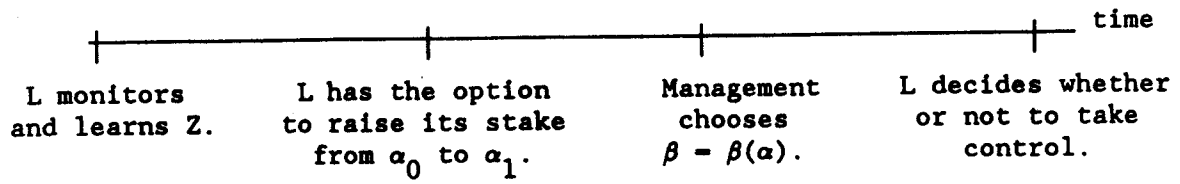


FIGURE 2A

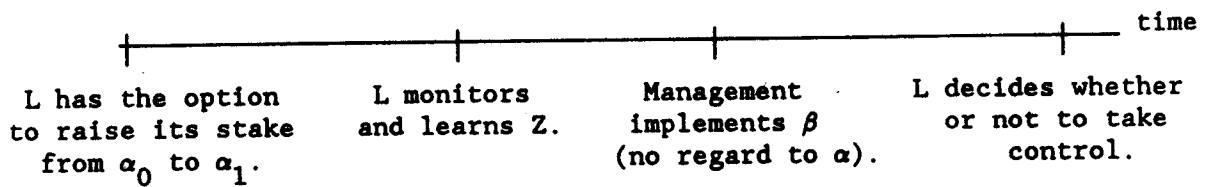


FIGURE 2B

Moreover, if L can commit to make only one secondary market purchase, then small shareholders can infer the firm's final value and sell their shares on this basis: $V_m(\alpha_0, \alpha_1) = q_0 + \beta^*(\alpha_1, Z)Z$. Substituting into (5) gives $W_1 - W_0 = (\alpha_1 - \alpha_0)C/\alpha_1$, which is strictly increasing in α_1 . Hence, we have

Proposition 2: Suppose L can disclose all potential improvements and can commit to purchase shares only once prior to a possible tender offer. Then if L has a credible takeover threat, its gains are strictly increasing in the number of shares purchased.

Shleifer and Vishny (1986, Proposition 6, p.476) appear to derive a result similar to Proposition 1, showing that if L has a sufficiently large stake and can commit to make a single small share purchase, then this purchase always results in a net gain. Yet upon close examination the two propositions address different issues. Shleifer and Vishny's result applies only where L owns shares and attempts to raise its stake before monitoring, as illustrated in Figure 2B. Here Proposition 1 applies where L has already incurred all monitoring costs, learned the firm's true value, and disclosed it publicly.

Consider a report in the October 6, 1989 issue of The Wall Street Journal: "Investor Carl Icahn, as expected, raised his stake in USX Corporation to 13.06% from 11.4%, putting pressure on the company to further restructure or face a possible takeover (p.A2)." In this instance Icahn had already incurred the costs of monitoring USX and publicized his findings, explaining how he wanted management to sell or spin off the company's steel business. Proposition 1 shows that the second-round share purchase was profitable (a result Icahn no doubt finds reassuring) because even if he paid full value for the additional 2% stake the pressure on management to raise the firm's value yielded a gain on the 11% foothold. Shleifer and Vishny's proposi-

tion implies something different: Icahn's second-round share purchase would have been profitable if i) he had not monitored the firm prior to acquiring his 11% stake or raising his stake to 13%; ii) he could credibly claim not to have monitored; and iii) he could credibly promise not to buy again.

In Shleifer and Vishny's model, where the size of L's ownership stake has no bearing on managerial concessions, L has only three possible motives for buying shares after learning Z . First, small shareholders may correctly infer that the management-large shareholder conflict will be resolved through jawboning but underestimate the extent of the concessions, βZ . In this case the stock's secondary market price will lie below its post-negotiation value. Second, small shareholders may correctly infer that the conflict will be resolved through a hostile takeover but underestimate the extent of the post-takeover improvements, Z . In this case the stock's secondary market price will lie below its post-takeover value. Third, small shareholders may infer that the conflict will be resolved through informal negotiations when in fact L will resort to a takeover. In this case the stock's secondary market price will reflect the prospect of negotiated concessions rather than the more valuable post-takeover improvements, and L may want to buy shares as a prelude to takeover. In all three cases, L's motive revolves around some error on the part of small shareholders and it profits only at their expense. Knowing this, small shareholders will refuse to sell on any terms acceptable to L. An analysis of Shleifer and Vishny's model at the post-monitoring stage yields an outcome precisely opposite from the one described in Proposition 1 here.

B. Large Shareholders with Less Valuable Improvements

Next consider a large shareholder with an ownership stake of $\alpha_0 < \alpha_{\min}$ (so that $Z < Z_{\min}$). It would seem that management can pursue the status quo without fear of a hostile takeover, so that $W_0 = \alpha_0 q_0$. But if L can increase

its stake to $\alpha_1 > \alpha_{\min}$, then it can create a credible threat and management must make changes. By (4) the gains from an $\alpha_1 - \alpha_0$ share purchase are now

$$(5') \quad W_1 - W_0 = (\alpha_1 - \alpha_0)[q_0 + \beta^*(\alpha_1, Z)Z - V_m] + \alpha_0 \beta^*(\alpha_1, Z)Z$$

In (5'), $q_0 + \beta^*(\alpha_1, Z)Z$ represents the value of the $\alpha_1 - \alpha_0$ shares L purchases and V_m represents their cost. Hence, the first right-hand-side term represents the profits L earns on these shares. The second right-hand-side term represents the gain on the foothold stake. By promising to purchase shares only once prior to a tender offer, L ensures that $V_m = q_0 + \beta^*(\alpha_1, Z)Z$ and $W_1 - W_0 = \alpha_0 \beta^*(\alpha_1, Z)Z > 0$. This gives rise to the third proposition.

Proposition 3: Suppose L can disclose all potential improvements and can commit to purchase shares only once prior to a possible tender offer. Then even if L has not discovered an improvement that by itself represents a credible threat, it can profit by raising its stake to the point where it has one.

Even if L pays more than full value for its $\alpha_1 - \alpha_0$ stake (e.g, if investors suspect that L will raise its stake again), the purchase is profitable if the gains on the foothold exceed the premium L pays on its newly acquired shares.

C. The Emergence of Large Shareholders

Finally, suppose a small shareholder or outside investor (hereafter S) monitors the firm and identifies Z. Suppose, too, that S can secretly purchase up to but no more than a fraction $\alpha_f < \alpha_{\min}$ of the firm's shares. It would appear that S cannot capitalize on its monitoring effort and that management has no reason to alter the status quo. But S can secretly buy a stake of α_f and then openly increase this to $\alpha > \alpha_{\min}$. To avoid a takeover management must then raise the firm's value to $q_0 + \beta^*(\alpha, Z)Z$. By purchasing the initial foothold before disclosing Z, S pays only $\alpha_f q_0$ for

it. If S can commit not to buy yet again, then the second purchase costs $(\alpha - \alpha_f)[q_0 + \beta^*(\alpha, Z)Z]$. Since S's final holdings are worth $\alpha[q_0 + \beta^*(\alpha, Z)Z]$, it earns $\alpha_f \beta^*(\alpha, Z)Z$. If $\alpha_f > 0$, then S profits from its actions.

Of course, if others anticipate this possibility, the firm's initial value, V_0 , may exceed q_0 . The profits from buying a foothold stake and then raising it to α are reduced to $\alpha_f[q_0 + \beta^*(\alpha, Z)Z - V_0]$. But unless all secret trading is eliminated, it remains profitable to do so if it can buy the foothold at a discount, i.e., if $q_0 + \beta^*(\alpha, Z)Z > V_0$. This gives

Proposition 4: Suppose L can disclose all potential improvements. Suppose too that disclosure rules do not rule out all secret trading and that L can commit to purchase shares only once after acquiring its foothold stake. Then an outside investor who has completed its monitoring profits by accumulating a large stake in the firm as long as it can purchase the foothold at a price below its final value.

Suppose $\alpha_f = 0.1$, $\alpha = 0.3$, $q_0 = V^*/2$, $V_0 = 2V^*/3$, and $C = V^*/20$. Under this scenario, a takeover would yield a 50% increase in the firm's market value and a doubling of its initial asset values. But because of takeover costs, no outside investor could purchase a 10% secret foothold and immediately launch a profitable takeover. Nonetheless, someone could buy a 10% stake, openly increase it to 30%, and wield a takeover threat. The initial 10% foothold costs $(0.1)V_0 = (0.066)V^*$ but is ultimately worth $(0.1)(q_0 + \beta^*Z) = (0.0833)V^*$, for a gain of 25%. The next 20% costs $(0.2)(q_0 + \beta^*Z)$ and is worth exactly this amount, but the purchase gives rise to the gain on the foothold. In fact, S may not need to proceed beyond 10%: once management sees that S has the resources to go further it may make concessions without requiring it to do so.

Since the moves described here are profitable even when disclosure laws make takeovers unprofitable, the fact that we observe raiders buying foothold stakes and mounting takeovers indicates that the emergence of large shareholders is quite plausible. Indeed many corporate raiders have turned to this strategy in recent years, including Kirk Kerkorian at Chrysler, Carl Icahn at Texaco and USX, Coniston Partners at Allegis, and Harold Simmons at Lockheed.

The next section examines L's monitoring incentives and finds another well-known free rider problem: L bears the entire cost of monitoring but reaps the rewards only in proportion to its ownership stake. Nonetheless, free rider problems at this stage do not diminish L's post-monitoring incentives to buy shares, so Propositions 1 through 4 remain unaltered. Indeed, Section IV shows how such trading actually reinforces monitoring incentives.

IV. MONITORING

This section examines L's monitoring incentives. It maintains two post-monitoring assumptions not present in Shleifer and Vishny's framework: once L learns Z , it can publicly disclose its value; and management sets $\beta = \beta^*$ to preempt all takeovers. No other changes are made to their model. Summarizing, suppose L has access to a technology for finding valuable improvements. This technology gives L a probability I of drawing an improvement of value Z from an atomless cumulative distribution function $F(Z)$ for a cost $c(I)$. $F(Z)$ has a bounded support $(0, Z_{\max})$ and the cost function is assumed to satisfy $c'(I) > 0$ and $c''(I) > 0$. Shleifer and Vishny interpret I as research intensity. Finally, in the absence of post-monitoring trades, the benefits of research, $B(I, \alpha)$, including the gains from jawboning, are given by a modified version of Shleifer and Vishny's equation (3):⁵

$$(6) \quad B(I, \alpha) = I \times E\{\text{Max}[\cdot 5Z - (\cdot 5 - \alpha)\pi - C, \delta_{\min} \alpha \beta Z]\},$$

where

$$\delta_{\min}(\alpha) = \begin{cases} 1, & \text{if } Z \geq Z_{\min}(\alpha) \\ 0, & \text{otherwise.} \end{cases}$$

With a credible threat, $\delta_{\min} = 1$ and $\beta = \beta^*$. Otherwise, $\delta_{\min} = 0$. Thus,

$$(7) \quad B(I, \alpha) = I \times E[\alpha Z - C | Z \geq Z_{\min}(\alpha)].$$

Let $I^*(\alpha) = \operatorname{argmax}_{I \in [0, 1]} \{B(I, \alpha) - C(I)\}$. $I^*(\alpha)$ is increasing in α and decreasing in C .

But this set-up ignores L's option to buy more shares after monitoring. Two sources of trading profits arise. First, if $\alpha_0 > \alpha_{\min}$, then L can bolster its takeover threat and earn additional profits by raising its stake to $\alpha_1 > \alpha_0$. Second, if $\alpha_0 < \alpha_{\min}$, then even though L's stake does not represent an immediate takeover threat, L can profit by raising its stake to $\alpha_1 > \alpha_{\min}$.

If $\alpha_0 \geq \alpha_{\min}$, then L's post-monitoring trading profits are given by equation (5). Let $G_1(I, \alpha_0, \alpha_1)$ represent the pre-monitoring expected return on these post-monitoring trades:

$$(8) \quad G_1(I, \alpha_0, \alpha_1) = I \times E[(\alpha_1 - \alpha_0)(V^* - V_m) | Z \geq Z_{\min}(\alpha_0)] > 0.$$

It follows that $\partial G_1(I, \alpha_0, \alpha_1) / \partial I > 0$ and $\partial^2 G_1(I, \alpha_0, \alpha_1) / \partial I^2 = 0$.

If $\alpha_0 < \alpha_{\min}$, then L can raise its stake to α_1 and force management to raise the firm's value by $\beta^*(\alpha_1, Z)Z$. Let $G_2(I, \alpha_0, \alpha_1)$ represent the pre-monitoring expected return on these post-monitoring trades. Then

$$(9) \quad G_2(I, \alpha_0, \alpha_1) \\ = I \times E[\alpha_1 \beta^*(\alpha_1, Z)Z - (\alpha_1 - \alpha_0)(V_m - q_0) | Z_{\min}(\alpha_1) < Z < Z_{\min}(\alpha_0)] \\ = I \times E[\alpha_1 Z - (\alpha_1 - \alpha_0)(V_m - q_0) - C | Z_{\min}(\alpha_1) < Z < Z_{\min}(\alpha_0)] \geq 0.$$

Here $\alpha_1 \beta^*(\alpha_1, Z)Z$ is the gain on L's final stake and $(\alpha_1 - \alpha_0)(V_m - q_0)$ is the net cost of acquiring this stake. If $F(Z_{\min}(\alpha_1)) < F(Z_{\min}(\alpha_0))$, then $G_2(I, \alpha_0, \alpha_1) > 0$. Note that $\partial G_2(I, \alpha_0, \alpha_1) / \partial I > 0$ and $\partial^2 G_2(I, \alpha_0, \alpha_1) / \partial I^2 = 0$.

If after monitoring the firm L can raise its stake from α_0 to α_1 , then the total return to monitoring, represented here by $G(I, \alpha_0, \alpha_1)$, is

$$(10) \quad G(I, \alpha_0, \alpha_1) = B(\alpha_0, I) + G_1(I, \alpha_0, \alpha_1) + G_2(I, \alpha_0, \alpha_1).$$

Let $\hat{I}(\alpha_0, \alpha_1)$ denote optimal research intensity when post-monitoring trading is allowed: $\hat{I}(\alpha_0, \alpha_1) = \operatorname{argmax}_{I \in [0, 1]} (G(I, \alpha_0, \alpha_1) - C(I))$. L's optimal research intensity is increasing in α_0 . If L can commit to make only one purchase prior to a tender offer, then its optimal research intensity is also increasing in α_1 . More important, $\hat{I}(\alpha_0, \alpha_1) > I^*(\alpha_0)$ and $\partial \hat{I}(\alpha_0, \alpha_1) / \partial \alpha_0 > \partial I^*(\alpha_0) / \partial \alpha_0$: both the expected total and expected marginal returns to monitoring are higher when L can increase its stake than when it cannot. This gives rise to the fifth proposition:

Proposition 5: Suppose L owns a fraction α_0 of the firm's shares and has the option to raise this to $\alpha_1 > \alpha_0$ after monitoring the firm and disclosing the value of all potential improvements. Assume either of the following:

- i) $F(Z_{\min}(\alpha_0)) < 1$ and L can commit not to take control through secondary market purchases; or
- ii) $F(Z_{\min}(\alpha_1)) < F(Z_{\min}(\alpha_0))$.

Then both the returns to researching and the optimal level of research intensity are higher than if L has no post-monitoring option to raise its stake.

Free rider problems do not disappear when L can engage in post-monitoring trades, but the prospect of such trading bolsters L's monitoring incentives.

The next section introduces asymmetric information and discusses the ramifications for both monitoring and post-monitoring trades.

V. ASYMMETRIC INFORMATION

As before, continue to assume that managerial concessions depend upon the takeover threat L poses, but now assume that L cannot credibly disclose Z. Under this scenario there are many possible motives for L to buy shares. First, it may want to bolster its takeover threat. Second, it may want to signal to incumbent managers that they have underestimated Z. Management might then respond with concessions that not only reflect L's higher ownership stake (i.e., $\partial\beta/\partial\alpha > 0$) but also the higher perceived value of potential improvements ($\partial\beta/\partial Z > 0$). Third, L may want to buy shares so as not to signal to incumbent managers that they have overestimated Z. Fourth, L may want to buy if in doing so it can directly disclose information about Z that it could not reveal otherwise (e.g., it may face greater legal sanctions for misrepresenting Z when it does so in conjunction with a share purchase). Finally, L may want to buy shares if small shareholders have underestimated the extent of the improvements that will follow from managerial concessions or a takeover. In every case but the last, L's efforts to purchase shares do not come at small shareholders' expense. If L can somehow persuade small shareholders that it is not trying to exploit their ignorance, then circumstances may arise where L can profitably buy shares even though it cannot credibly disclose the value of the improvements.

Unfortunately, the introduction of asymmetric information leads to a complex set of strategies and informational issues that do not easily lend themselves to formal modeling. L now has many possible motives for buying shares, only a few of which are mutually exclusive, and if it buys shares once it may want to do so again. L can increase its ownership stake by varying amounts (e.g., 1%, 2%, 10%) and its choice changes its incentives to launch

a subsequent takeover and may provide information about the size of the potential improvements. This information may alter both the secondary market price and the price L would have to offer in a tender offer. This in turn affects the extent to which management must make concessions.

Perhaps most important, managers and small shareholders may not be symmetrically uninformed. L's actions may therefore send different signals to each group. This implies that each group must form beliefs about the information available to the other. In any secondary market transaction, for example, small shareholders price their stock only after forecasting the extent of managerial concessions and whether or not they will be sufficient to preempt a takeover. Likewise, management makes concessions only after assessing the price at which small shareholders would be willing to tender their shares. Indeed the concessions themselves may provide small shareholders with information about Z and thereby alter the price at which they would tender. Finally, the outcome depends on any commitments L might be able to make. If L buys shares once, can it commit not to do so again? And as part of any negotiated agreement with management, can L commit not to launch a subsequent takeover or sell out to another bidder?

Given the complexity of these issues, what if anything can we conclude? First, simple examples can be constructed to show that L's trading incentives are no longer as unambiguously positive as Propositions 1 through 4 suggest or as unambiguously negative as they are in a model where managerial concessions bear no relationship to the perceived takeover threat. L's efforts to raise its ownership stake depend in large part on how successfully it can communicate its motives and prospects to all concerned. Second, we cannot draw any a priori conclusions about the relative importance of informal nego-

tiations and hostile takeovers. If private information makes it difficult for large shareholders to profitably buy shares through secondary market transactions, in all likelihood it also makes it difficult to profitably buy shares through a hostile tender offer. And although managers and large shareholders have clear incentives to resolve their differences without resort to a costly contest for control, these incentives must be weighed against the fact that this information asymmetry may make such a resolution difficult.

VI. DISCUSSION

As in the Shleifer and Vishny model, an existing large shareholder here profits only on the shares it already owns and an emerging large shareholder profits only on its secret foothold stake. Any additional shares must be bought at what small investors perceive as their true value, and with perfect information these perceptions are correct. This paper's point of departure stems from the recognition that because managerial concessions should depend upon the credibility of takeover threats, a large shareholder that buys shares can wrest more concessions and increase the value of its initial stake.

The discussion so far has outlined two mitigating factors: monitoring costs and private information. Monitoring costs may account for the difference between shareholder gains that are positive but insignificant when α is small, and a decidedly negative return when they are factored in. But these costs reduce profits whether the large shareholder negotiates only a fraction of the improvements it has discovered or proceeds directly to a full-scale takeover. Once the large shareholder has made its investments in monitoring, the costs should not affect how it seeks to capitalize on them. In short, monitoring costs are sunk and have no obvious impact on whether a large shareholder wields control through ongoing negotiations or hostile takeovers.

Likewise, if a large shareholder cannot disclose the improvements it has found, it may be unable to profitably buy more shares — through either the secondary market or a hostile tender offer. Private information's effect on the way in which large shareholders wield control is ambiguous.

This section outlines other factors affecting L's control potential.

A. Free Rider Problems

Two free rider problems have arisen thus far. First, L bears all takeover costs while small shareholders reap most of the rewards. Though takeovers never actually occur here except perhaps when L has private information, these costs affect the concessions management makes: higher costs mean fewer changes. Second, L bears all monitoring costs but reaps the returns for its efforts only in proportion to its original stake. Except for one twist — L monitors more if it can subsequently buy shares — this free rider problem manifests itself in much the same way here as it does elsewhere.

At least two other free rider problems may arise. First, the discussion thus far has assumed that L can costlessly buy shares in the secondary market even though it faces a large and often prohibitive cost of buying shares through a formal tender offer. Realistically, secondary market transactions involve costs, both fixed and variable, which give rise to problems similar to takeover costs:⁶ L bears costs when it raises its stake but reaps the value of any additional managerial concessions only in proportion to its original ownership stake; it could conceivably wrest managerial concessions merely by threatening to buy more shares; as transactions costs rise, managerial concessions should therefore fall; and L and management have clear incentives to resolve their differences without L having to raise its stake.

Second, consider negotiations and negotiating costs. Thus far L has had nothing but its naked takeover threat: it chooses its ownership stake and man-

agement responds with the minimum concessions necessary to preempt a change in control. In practice, L may be able to gain greater representation on the board of directors, harass management with law suits and bad publicity, force it to share more information about the company, or align itself with dissident directors and managers, and in the process it might negotiate additional concessions. Such gains do not come without effort, and while the costs are borne privately, many of the benefits accrue to small shareholders. Negotiating costs do not derail L's efforts to wrest concessions (it always has the option to rely solely on its naked takeover threat), but they will result in a suboptimal effort.

B. Wealth Constraints and Risk Aversion

Even with perfect information Propositions 1 through 4 could change if L is risk averse or faces wealth constraints. Yet both wealth constraints and risk aversion also discourage takeovers, and at first glance it might even seem that they should have a greater adverse impact on takeovers than on informal negotiations, if only because takeovers require higher ownership stakes, along with the greater wealth and firm-specific risk that these entail. However, the influence L wields in informal negotiations depends upon the credibility of its takeover threat, so if wealth constraints and risk aversion discourage takeovers, they also reduce ongoing influence. The relative impact on informal negotiations and takeovers is ambiguous.

On the other hand, takeover threats yield large shareholders a measure of discretion not available with actual takeovers. In particular, L has the option to maintain modest holdings over time and to raise its stake only when circumstances require closer monitoring and control. This option frees up L's wealth and limits its long-term exposure to firm-specific risk. Moreover,

the mere threat to buy more shares may convince management to make concessions, and in this case L's influence may exceed what its minority ownership stake would suggest.

C. Other Considerations and an Additional Caveat

The model has so far ignored other forces that might encourage informal negotiations. First, it assumes that the firm has no other large shareholders and that no other outside investor will buy a stake. As with hostile takeovers, the incentive to amass an ownership stake and then negotiate could be bolstered if L can align itself with other large shareholders or buy their stakes. Second, L may gain other advantages from a higher ownership stake, including greater access to inside information, greenmail, and various other amenities. Finally, by raising its stake L may pry open the lines of communication with management and over time persuade it that further changes represent the best course of action.

One final caveat is in order. Suppose negotiations provide management with an opportunity to stall and thereby erect additional takeover defenses. In doing so management diminishes L's takeover threat and reduces the concessions it must make in any informal negotiations. If L suspects that managerial overtures to negotiate are designed even in part as a stalling tactic, it may forego them and proceed directly to a tender offer. Ironically, if management can respond to L's calls for change by raising its takeover costs, the prospects for a hostile takeover could rise.

This possibility also points to one possible factor in the recent drop in hostile takeovers. In recent years incumbent managers have often learned how to erect many takeover defenses in advance of shareholder challenges rather than in response to them, and they have learned how to stymie takeover bids long enough so that they have enough time to erect still other defenses.

Consequently, corporate raiders have often lost the element of surprise and with it the incentive to forego negotiations and proceed directly to hostile tender offers. To the extent that recent innovations in managerial defensive tactics reflect a change in timing rather than substance, the falloff in activity overstates the impact these innovations have had on the effectiveness of large minority shareholders.

At the same time, though, to the extent that incumbent managers have successfully raised takeover costs, the falloff in takeover activity understates the impact on the effectiveness of large minority shareholders because higher takeover costs diminish their takeover threats and therefore their ongoing power to discipline shirking managers.

VII. CONCLUSIONS

Are large shareholders mostly passive monitors except on rare occasions when they mount hostile takeovers? Or do they wield ongoing control through a process of monitoring and negotiation? The obvious answer is that they do some of both, but in recent years many economists have argued that the abject failure of internal controls has forced large shareholders to resort most often to takeovers to correct gross managerial shirking. In short, the prevailing wisdom seems to be that takeovers are the dominant form of control.

But if takeovers empower large minority shareholders, then so should takeover threats. Other considerations — monitoring, transaction, takeover, and negotiation costs; risk aversion and wealth constraints; alliances with other large shareholders; and so forth — also affect both forms of control in similar ways. If private information makes it unprofitable for large shareholders to buy shares in secondary market transactions, private information may also make it unprofitable to buy shares through a tender offer.

And one inescapable consideration suggests that negotiations should overshadow takeovers: managers and large shareholders have clear incentives to resolve their differences without resort to costly contests for control. By assuming that managerial concessions do not take into account the size of the large shareholder's ownership stake, Shleifer and Vishny give short shrift to informal negotiations. In their model management is sometimes unwilling or unable to implement a sufficient fraction of the improvements uncovered by the large shareholder. And if no amount of negotiation can change this, then it is not surprising that hostile takeovers become necessary.

Here, in contrast, management is willing and able to implement any changes it deems necessary, so if there are no miscommunications, then it is no less surprising that informal negotiations are always used in place of takeovers. Moreover, large shareholders can very plausibly bolster their influence in these negotiations by raising their ownership stakes. This paper therefore shows that the relative importance of these alternate forms of control revolves primarily around two factors: managerial competence and the nature of any information asymmetries.

Finally, large shareholders' takeover threats should be effective even if boards of directors, proxy fights, compensation schemes, and other internal controls are not. The evidence compiled by those who portray these controls as ineffective may instead indicate that large minority shareholders are in charge. Their direct oversight, if effective, reduces the need for other alternatives. For example, consider boards of directors. A large shareholder who wields substantial influence over managerial decisions may not want a powerful and independent-minded board, since this may interfere with his own efforts. He may instead approve of the sort of "passive" directors so often de-

scribed in the literature. If he monitors closely, develops a good working relationship with management, and shares in the responsibility for major decisions, then we should expect low managerial turnover. Even where shareholder and managerial objectives conflict, they can often be resolved without dismissing management. Whether a firm retains its assets and fires management or retains its management and sells assets to better managed firms, the effect is much the same. If large shareholders wield the kind of ongoing control described here, we would more often expect to observe management retained and assets divested than the other way around, and in practice this is indeed what we see.

REFERENCES

- Benston, George J., "The Self-Serving Management Hypothesis: Some Evidence," Journal of Accounting and Economics, April 1985, 7, 67 - 84.
- Berle, Adolf A., and Means, Gardiner C., The Modern Corporation and Private Property, New York: Macmillan, 1933.
- Coughlan, Anne T., and Ronald M. Schmidt, "Executive Compensation, Management Turnover, and Firm Performance: An Empirical Investigation," Journal of Accounting and Economics, April 1985, 7, 43 - 66.
- Demsetz, Harold, "Structure of Ownership and the Theory of the Firm," Journal of Law and Economics, 1983.
- , and Ken Lehn, "Structure of Corporate Ownership: Causes and Consequences," Journal of Political Economy, 1985.
- Grossman, Sanford J., and Oliver D. Hart, "Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation," Bell Journal of Economics, Spring 1980, 42 - 64.
- Jensen, Michael C., "Agency Costs of Free Cash Flow, Corporate Finance and Takeovers," American Economic Review, Papers and Proceedings, May 1986, 323 - 329.
- , "Takeovers: Their Causes and Consequences," Journal of Economic Perspectives, Winter 1988, 2, 21 - 48.
- , and Kevin J. Murphy, "Performance Pay and Top-Management Incentives," Journal of Political Economy, April 1990, 98, 225 - 264.
- Johnson, W. Bruce, Robert P. Magee, Nandu J. Nagarajan, and Harry A. Newman, "An Analysis of the Stock Price Reaction to Sudden Executive Deaths: Implications for the Managerial Labor Market," Journal of Accounting and Economics, April 1985, 7, 151 - 74.

- Morck, Randall, Andrei Shleifer, and Robert Vishny, "Alternative Mechanisms for Corporate Control," American Economic Review, September 1989, 79, 842 - 52.
- Murphy, Kevin J., "Corporate Performance and Managerial Remuneration: An Empirical Analysis," Journal of Accounting and Economics, April 1985, 7, 11 - 42.
- Shleifer, Andrei, and Robert Vishny, "Large Shareholders and Corporate Control," Journal of Political Economy, June 1986, 94, 461-488.
- and ———, "Value Maximization and the Acquisition Process," Journal of Economic Perspectives, Winter 1988, 2, 7 - 20.
- Vancil, Richard F., Passing the Baton: Managing the Process of CEO Succession, Boston: Harvard Business School Press, 1987.
- Walsh, James P., "Top Management Turnover Following Mergers and Acquisitions," Strategic Management Journal, March - April 1988, 9, 173 - 83.
- Warner, Jerold B., Ross L. Watts, and Karen H. Wruck, "Stock Prices and Top Management Changes," Journal of Accounting and Economics, January/March 1988, 20, 461 - 92.
- Weisbach, Michael S., "Outside Directors and CEO Turnover," Journal of Financial Economics, January/March 1988, 20, 431 - 60.

ENDNOTES

¹For example, see Demsetz (1983); Demsetz and Lehn (1985); Shleifer and Vishny (1986).

²In the Shleifer and Vishny framework, if a large shareholder makes a tender offer when it could have jawboned instead, small shareholders infer that potential improvements in the firm are highly valuable and as such require a larger takeover premium. If the large shareholder can commit not to negotiate with incumbent management, then takeovers become easier.

³The assumption that L can disclose Z ex post represents an important departure from the Shleifer and Vishny model. The ramifications of this assumption are discussed in detail in Section V.

⁴The only difference between the condition expressed here and the one that appears in Shleifer and Vishny's work arises because they initially assume that $\beta = 0$. Doing so here would reconcile the two conditions.

⁵Through much of their analysis they assume that $\beta = 0$. Hence, their unmodified equation (3) has $\alpha\beta Z = 0$.

⁶These costs should not be confused with the premium L must pay for its shares in the secondary market. This premium reflects the added value L can create with its higher stake.