

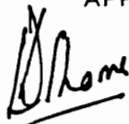
**CAUSES AND CONSEQUENCES OF EXTERNAL BLOCKHOLDINGS**

by

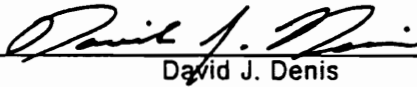
Sudhir Singh

Dissertation submitted to the Faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy  
in  
Finance

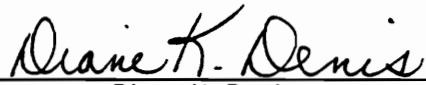
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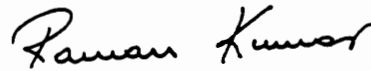
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# **CAUSES AND CONSEQUENCES OF EXTERNAL BLOCKHOLDINGS**

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Sudhir Singh

Dilip K. Shome, Chairman

Finance

(ABSTRACT)

This dissertation seeks to investigate empirically the determinants and implications of large block shareholdings. Specifically, it attempts to answer the following questions : (1) Why do some firms have blocks and others not ? (2) What are the valuation consequences of large block creations ? (3) What are the cross-sectional relationships between the market response and characteristics of the firm and of the blockholder ? and, finally, (4) What are the time series (and control-firm-adjusted) changes in firm performance measures and operating variables attributable to large shareholder monitoring ? The above questions are addressed by recognizing, firstly, that the incidence of large block shareholdings is rational only when the gains from a blockholding exceed the costs of foregone diversification-of-portfolio opportunities. The potential sources of gains to the blockholder are identified as resulting from firm-value-increasing reductions in the agency costs of free cash flow and other non-free-cash-flow-related equity agency costs, equity-value-increasing potential for wealth transfers from bondholders, firm-value-increasing expectation of synergy gains in the case of corporate blockholdings, as well as equity-value-reducing gains such as the potential for insider trading, and the expectation of a greenmail premium. It is hypothesized that the net valuation impact of these gains to the blockholder is positive. Event study results support this hypothesis. Cross-sectional regression results suggest that announcement period abnormal returns are reliably explained by the potential for wealth transfers from bondholders, as proxied by the level of discretionary assets in the firm. Further, consistent with theory, announcement excess returns are positively related to the size of the blockholding and the identity of the blockholder. There is no evidence that blockholders play a valuable role in limiting managerial discretion over free cash flow. Firm-specific risk also appears to have no

valuation impact; this suggests that the potential benefits from blockholder monitoring may be offset by the potential costs resulting from insider trading. Finally, a pre- and post-block matched-pair comparison of key performance measures and operating variables between the sets of sample firms and control firms provides weak support for the monitoring role of the large block shareholder. A time-series tracing of blockholder affiliation with the target firms reveals that in only a small fraction of firms does the blockholder obtain a seat on the target firm's board of directors - a virtual requirement for effective monitoring to occur. Overall, these findings do not support theoretical arguments that envisage blockholder monitoring as a long-term incentive-alignment mechanism between managers and shareholders.

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# Chapter 1

## *Introduction*

The last few years have witnessed the emergence of a growing body of empirical literature in the area of ownership concentration and its impact upon corporate value. While the spate of takeover activity witnessed during the eighties may have sparked contemporaneous academic attention, the primary reason for an enduring interest in this issue appears to be the unresolved nature of the relationship itself.

Empirical evidence concerning the association between ownership structure and firm value thus far appears to be inconclusive. Some of the prevailing confusion surrounding this relation may be attributed to the failure of most past studies to distinguish among the different constituents of ownership structure - insiders, large outside shareholders, and institutions - and assess the impact of each, separately, on firm value. Because the specific incentives and skills that potentially affect value are not homogeneously distributed across the different constituents of ownership structure, there is clearly a need for examining independently the effect of each constituent on corporate value. Additionally, while several studies [Jensen and

Meckling (1976), Leland and Pyle (1976), Stulz (1988), Morck, Shleifer and Vishny (1988)] have focused on the determinants and implications of insider ownership, the same level of attention has not been devoted to the causes and consequences of ownership by other constituents. This dissertation, therefore, attempts to empirically investigate the impact of the other important constituents of ownership structure upon firm value, namely, the large outside shareholders, both individuals and corporations, as well as institutional blockholders.

The ambiguity in the conclusions of empirical research in relation to insider holdings is, to some extent, a reflection of the theoretical debate on the impact of inside ownership on corporate value. At the center of the debate lies the issue of separation between ownership and control that characterizes a diffusely-held modern corporation, and the resultant possibility of divergence of interests between the firm's managers and shareholders. One view, articulated originally by Berle and Means (1932) and formalized later by Jensen and Meckling (1976), holds that increasing inside ownership reduces diffusion of ownership, aligns managerial interests with the remaining shareholders, reduces equity agency costs, and increases firm value. However, Stulz (1988) argues that beyond a certain level of inside ownership, the possibility of removing inefficient management through a takeover is reduced, and consequently, entrenchment sets in and firm value decreases. Thus, inside ownership is an exogenous determinant of firm value, and the relationship is non-linear. Empirical support for the agency-related arguments is provided by the studies of Morck, Shleifer and Vishny (1988) and McConnell and Servaes (1990). Morck, et al. document a non-monotonic relationship between insider holdings and firm value, while McConnell and Servaes report a curvilinear relationship, with firm value being maximized at insider holdings below 50%.

In contrast, Demsetz (1983) offers an alternative theory of the relation between ownership concentration and firm value. He argues that the ownership structure of a firm is an endogenous outcome of firm-specific factors and thus, cross-sectional variation in ownership structure is perfectly compatible with the goal of firm-value maximization. In his view, then, an exogenously imposed ownership structure that disregards firm-specific variables is clearly unsuitable for maximizing firm value. Accordingly, Demsetz's conclusion is that there should be no relation between ownership structure and firm performance. Demsetz's conclusions have found support in the studies of Demsetz and Lehn (1985) and Holderness and Sheehan (1988). Demsetz and Lehn do not find a significant positive relationship between firm profitability and ownership concentration. Holderness and Sheehan, too, in their study on majority-held firms, report no statistical distinction in various performance measures between majority-held firms and their diffusely-held counterparts.

In regard to external blockholdings, the theoretical work of Shleifer and Vishny (1986) was the first to envisage a monitoring role for the large block shareholder, and thus predict a positive association between firm value and large block shareholdings. In their model, the potential threat of takeover or dismissal that the external blockholders can exert upon incumbent management serves as an efficient device in arresting a divergence of interests between managers and shareholders. Due to the "public good" nature of monitoring and the significant private costs involved, small shareholders are argued to have no incentives to monitor management individually, but to "free-ride" on others' monitoring efforts instead. The large external shareholder, however, due to his or her ability to internalize the costs of monitoring and recover a large fraction of the gains from a change of management, has some incentives to monitor. The rewards for monitoring are realized through

value-increasing changes induced by the blockholder's presence. More recently, the works of Hirshleifer and Titman (1988) and Jegadeesh and Chowdhry (1988) have paralleled the model of Shleifer and Vishny. Hirshleifer and Titman predict a positive association between firm value and the size of the blockholding, since a large block size increases the probability of a value-increasing takeover. Alternatively, the Jegadeesh-Chowdhry model depicts the size of the initial blockholding ("footholding") as a signal of the potential value gains following a takeover. While theory has delineated a monitoring role for the large outside shareholder, empirical evidence concerning this role is mixed. Mikkelson and Ruback (1985) and Holderness and Sheehan (1985) use event-study methodology to document firm value increases associated with large block purchases of the firm's shares. McConnell and Servaes (1990), however, using a cross-sectional regression approach, find no evidence of any association between firm value and the presence of blockholdings.

The relation between firm value and institutional ownership also has not yet been rigorously explored in the finance literature. No theoretical model concerning the relation between institutional holdings and corporate value has been developed as yet. In addition, empirical work concerning institutional shareholdings also appears to be confined to an analysis of their role in corporate control activities [Jarrell and Poulsen (1987), Pound (1988), Brickley, Lease and Smith (1988)]. The evidence is conflicting. On the one hand, Jarrell and Poulsen (1987) and Brickley, Lease and Smith (1988) present evidence suggesting a positive relation between firm value and institutional shareholdings, in their studies on anti-takeover amendments. Jarrell and Poulsen find that the most harmful amendments have larger insider holdings and lower institutional holdings. Brickley, et al. report that institutions more actively oppose management proposals that appear harmful to shareholders. Taken

together, these studies provide evidence that is contrary to the popular perception of passivity commonly associated with institutions. McConnell and Servaes (1990), too, report a significant positive cross-sectional relationship between Tobin's Q and the fractional ownership of equity held by institutions. On the other hand, Pound (1988) finds that the probability of a management victory in a proxy contest is an increasing function of institutional ownership of equity, thus implying a negative relation between firm value and institutional blockholdings.

Against the backdrop of conflicting empirical evidence on both large block shareholders and institutions and their association with firm value, this dissertation attempts to resolve some of the ambiguities in previous findings and to research some fundamental questions concerning the incidence of large block ownership of shares. While most empirical studies have generally documented stock price reactions to announcements of block purchases, little attention has been accorded in the literature to an examination of factors that make the block acquisition decision a rational one. This dissertation, therefore, attempts to estimate the relation between corporate value and large block shareholdings by investigating the possible sources of gains to the blockholder that justify a large block purchase. Specifically, it attempts to answer the following questions: (1) Why do some firms have blockholders and others not? (2) What are the valuation consequences of new block creations? (3) What are the cross-sectional relationships between the market response to new block formations and firm characteristics? and finally, (4) What are the time-series changes in firm characteristics resulting from the formation of large blocks? In examining the above questions, this dissertation seeks to empirically investigate the monitoring role of the large shareholder ascribed by Shleifer and Vishny (1986).

The first question is addressed by recognizing, foremost, that in the presence of wealth constraints and risk aversion, a blockholding imposes non-trivial costs on the blockholder in the form of lost diversification opportunities. Therefore, the decision to hold a block is rational when the gains from blockholdings exceed the cost of foregone diversification. The possible sources of gains to the blockholder, then, are identified as accruing from value-increasing reductions in the agency costs of equity [Jensen and Meckling (1976)] including the agency cost of free cash flow [Jensen (1986)], equity-value increasing wealth transfers from bondholders [Jensen and Meckling (1976), Smith and Warner (1979)], value-increasing expectation of synergy gains in the case of corporate blockholders, the potential for profitable insider trading [Demsetz (1986)], and finally, the expectation of a greenmail premium. Clearly, the gains resulting from reductions in equity agency costs are a function of the monitoring effort expended by the large shareholder. Wealth transfers from bondholders can result either from exploitative actions of the blockholder in the context of the bondholder-stockholder relationship, or when blockholder monitoring ensures that managerial risk aversion does not result in the adoption of "safe" - but commensurately non-value-maximizing - projects. The potential for insider trading, inherent in the characteristic of firm-specific risk, represents a source of secondary compensation to the blockholder; it is, however a cost to the small shareholder since the gains from insider trading are appropriated solely by the blockholder.

The second research question relates to the announcement effects of new block creations. The gains resulting from reductions in the non-free-cash-flow agency costs of equity, a reduction in the agency cost of free cash flow, an increase in wealth transfers from bondholders, and an expectation of synergy gains in the case of corporate blockholders, are each associated with an increase in the firm's stock

price. The impact of firm-specific risk on equity value depends on the tradeoff between the externalities associated with large shareholder monitoring and those associated with insider trading. Greenmail, as shown by Dann and DeAngelo (1983), and Bradley and Wakeman (1983), is expected to be value-reducing in that it can serve as a vehicle for managerial entrenchment. Based on the above arguments, it is hypothesized that the net impact of announcements of new block formations is value increasing. Accordingly, the stock price reaction is hypothesized to be positive. The results of the event study done on weekly data, for a sample of 92 firms for which new blocks are created in the period 1984-86 indicate a nearly 2% and significant abnormal return in week 0. Thus, evidence of a positive reaction supports the proposed hypothesis.

The next issue concerns the investigation of a cross-sectional association between the announcement reaction and characteristics of the firm and of the block. It is hypothesized that the announcement reaction is positively related to the pre-announcement level of free cash flow and the potential for wealth transfer from bondholders. Following the predictions of several theoretical models, [Shleifer and Vishny (1986), Hirshleifer and Titman (1990), and Jegadeesh and Chowdhry (1988)] and empirical research [Holderness and Sheehan (1985), Barclay and Holderness (1991)], the size of the blockholding is hypothesized to be positively related to the announcement reaction. In regard to the identity of the blockholder, while the expectation of synergy gains can be hypothesized to have a positive impact on announcement reaction in the case of corporate blockholders, there is no theoretical basis to hypothesize a relation between market reaction and institutional blockholdings. Thus, the association between institutional holdings and announcement abnormal returns is an empirical question. The cross-sectional

association between excess returns and firm-specific risk depends upon the trade-off between the gains from large shareholder monitoring and the costs imposed by the potential for insider trading; this too is an empirical question. Cross-sectional regression results suggest that abnormal returns are significantly explained by the potential for wealth transfers from bondholders, the size of the blockholding, and whether the blockholder is a corporation or an institution. There is no evidence of the market's perception of blockholder motivation - or skill - in mitigating free cash flow problems. No significant association between firm-specific risk and announcement returns is found either, suggesting a one-to-one tradeoff between monitoring gains and insider trading costs.

The last question in this thesis pertains to an investigation of the process of *ex-post* validation of the market's reaction to new block creations as "good news" events. The methodology examines pre- and post-block comparisons of operating variables and key performance measures using matched pairs of sample and control firms. The central hypothesis tested here is that if large blockholder monitoring has been effective, then there should be significant positive changes observed in the firms' accounting returns and firm values proxied by the market-to-book ratios. In addition, improvements in these performance measures should be manifest in significant changes in key operating variables, such as free cash flow and capital expenditures. The matched-pair comparisons indicate a significant increase in accounting returns, but no significant changes in other variables. Furthermore, when blockholder affiliation with the target firm is traced over time, in only a small fraction of sample firms do blockholders acquire a seat on the board of directors. Since effective monitoring requires presence on the board, the results of the last part of the study reveal little evidence of monitoring. Overall, this evidence provides little



support for the institution of large blockholder monitoring as an incentive-alignment mechanism between managers and stockholders.

The rest of the dissertation is structured as follows. Chapter 2 presents a detailed review of the literature on the relation between ownership structure and firm value. Chapter 3 is devoted to the development of various hypotheses and to an examination of the valuation consequences of large block formations. Chapter 4 provides details of the cross-sectional analysis of firm-specific and block-specific characteristics that impact the announcement reaction. Time-series changes in firm characteristics induced by large shareholder monitoring are discussed in Chapter 5. Chapter 6 concludes the dissertation.

## **Chapter 2**

### ***Literature Review***

This chapter presents a review of the theoretical and empirical literature on the association between ownership structure and corporate value. It attempts to provide perspective on the current thinking of the academic community on this issue through a discussion of the independent effect of each constituent of ownership structure, namely insiders, large block shareholders, and institutional shareholders, upon firm value. As this survey reveals, there is no consensus among theoretical researchers on even the existence, much less the nature, of an association between firm value and ownership structure.

#### **2.1 Insider Holdings**

The genesis of the theory of agency lies in examining the implications of a divergence of interests between managers and shareholders. However, there is a debate about the extent to which this divergence affects firm value, and further, on

whether inside ownership is exogenous or endogenous. While the models of Jensen and Meckling (1976), and Stulz (1988) establish the exogeneity of ownership structure, Demsetz (1983) advances the notion of endogeneity. Empirical studies do not consistently offer evidence supporting either theory. While Demsetz and Lehn (1985) and Holderness and Sheehan (1988) offer evidence supporting Demsetz, the findings of Morck, Shleifer and Vishny (1988) and McConnell and Servaes (1990) support the agency-theoretic models of Jensen and Meckling (1976) and Stulz (1988). A detailed review of the literature on insider holdings follows.

### **2.1.1 Theoretical Literature**

Theoretical literature has not yet resolved the relationship between ownership structure and firm value in the light of two opposing, yet compelling, arguments about the nature and extent of the relationship. That a positive association exists has been proposed by making some behavioral assumptions about the managers of the modern corporation. Theorists observe that intrinsic to the typical modern firm, in its evolution as an artifact for establishing contracting relationships among individuals, is the separation of ownership and control. This separation, as pointed out by Berle and Means (1932), "...produces a condition where the interests of owner and of ultimate manager may, and often do, diverge, and where many of the checks which formerly operated to limit the use of power disappear...."<sup>1</sup> The problems resulting from the divergence of interests between the agent (the manager) and the principals (the shareholders) and their implications for firm value were modelled formally by Jensen and Meckling (1976) in their theory of agency, a cornerstone of modern

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<sup>1</sup> Berle and Means (1932), as quoted in Demsetz (1983).

corporate finance theory. While Jensen and Meckling (1976) discuss the existence of agency costs associated with both equity and debt in their derivation of an optimal financial structure, only the former is discussed below. The focus here is primarily on the agency problems between managers and outside shareholders, brought about by the division of ownership (and concomitantly control) between these two disparate parties. The alternative viewpoint advanced by Demsetz (1983) is that ownership structure is an endogenous outcome of firm-specific factors, and that diffuseness of ownership structure, in and of itself, does not conflict with the goal of value maximization. A detailed discussion of both arguments follows.

- Jensen and Meckling (1976) : Agency Costs of Equity

The Jensen-Meckling theory of agency is developed on the basis of two behavioral assumptions about the various participants involved in the modern corporation. First, all individuals are assumed to be rational economic agents whose actions serve to maximize their own welfare. Consequently, the delegation of control from principals to agents induces agents to use the power vested in this control to their advantage, even if such use works to the detriment of the principals. Second, in the light of informational disadvantage of the principals relative to the agents, the principals are assumed to be capable of forming unbiased expectations of the extent to which agency problems impinge on the value of the firm and ultimately, the value of their individual wealth. They are, then, able to factor in the potential agency costs when pricing the firm's securities. The framework ascribes to the owner-manager the objective of maximizing his utility from pecuniary returns in the form of wages (assumed fixed) and non-pecuniary returns in the form of non-marketable perquisites associated with the job. In the case of a single owner

firm, for each additional dollar's worth of the manager's consumption of perquisites, the rewards and costs accrue only to him. A conflict, however, arises when the owner-manager sells off a part of the equity claims to the firm to outside shareholders, but continues to enjoy full retention of control of the firm's resources, thereby serving as an agent of the outside, non-voting shareholders. As the fractional ownership of the agent falls, he sees an incentive to appropriate increasing amounts of the firm's resources as perquisites, as he now bears only a fraction of the costs of the benefits that he consumes in pursuit of utility maximization. The outside shareholders, in recognizing the exploitative propensity of the partial owner, transfer the full burden of these agency costs back to him in the form of an appropriate discount in the price they pay to acquire the firm's securities.

Jensen and Meckling point out that excessive perquisite consumption by the manager is not the only or even the most important source of conflict. Conceivably, "... the most important conflict arises from the fact that as the manager's ownership claim falls, his incentive to devote significant effort to creative activities such as searching out new profitable ventures falls", the resultant "value of the firm being substantially lower than it otherwise could be". This argument seems contrary to the "entrenchment" hypothesis [Morck, Shleifer and Vishny (1988)], according to which, a large fractional ownership equity by managers effectively insulates them from the effects of disciplinary mechanisms such as the managerial labor market [Fama (1980)], or the threat of an outside takeover [Shleifer and Vishny (1986)].

The resolution of inherent agency problems in the firm involves establishing incentives and monitoring the actions of agents so as to better align the interests of managers with those of the principals. Establishing incentives might involve a

change in the design of the total compensation package to make it more performance-based. The monitoring process, of course, is costly and reduces the value of the firm; the price discount sought by outside investors reflects the cost of monitoring. Sometimes, the agent might voluntarily expend resources - that is, incur bonding costs - to guarantee that he or she will not take certain actions that might be harmful to the principals or to ensure that the principals will be compensated if he does take such actions. Despite the positive monitoring costs incurred by the outside investors, and bonding costs incurred by the agent, some level of aberrant behavior - and its value-reducing effect - might persist; this welfare loss is called a residual loss. Total agency costs thus include the monitoring costs incurred by the principals, the bonding costs incurred by the agent, and the residual loss. In summary, then, the Jensen-Meckling model predicts that the greater the fractional ownership of the managers, the greater the alignment of interests between managers and the outside shareholders, the lower the level of agency costs imposed on the firm, and thus, the greater the value of the firm.

- Stulz (1988) : Discipline of the Takeover Market

Stulz (1988) presents an alternative perspective on the agency problems between managers and shareholders, wherein he relies on the importance of the takeover market for correcting aberrant managerial behavior. In Stulz's framework, the distribution of voting rights between managers and outside shareholders creates a conflict of interest between them due to the fact that a successful tender offer affects the welfare of managers and outside investors differently. Managerial ownership of the firm's equity is dictated purely by the ability it confers upon the holders to affect the behavior of potential bidders and, thus, the probability of losing

control. Managers' attempts to thwart prospective bidders from seizing control of the firm are motivated not just by the loss of pecuniary benefits in the form of wages, but also their proclivity for the private benefits of control.<sup>2</sup> The outside shareholders are assumed to be atomistic and non-collusive in their behavior; thus their gains from a hostile takeover attempt depend primarily upon their ability to appropriate for themselves the gains that would otherwise accrue only to the bidder in the event of a successful bid. Management's control and subsequent manipulation of the firm's shares conflicts with the outside shareholders' opportunities for such appropriation since it results in a reduction in the frequency of takeover attempts, particularly when the fractional ownership is high.

The model shows that the premium that the bidder offers to gain control of the firm is an increasing function of the fraction of voting rights controlled by the incumbent management, but the probability of success is a decreasing function of the same.<sup>3</sup> The effect of an increase in the fraction  $\alpha$  of the voting rights controlled by management upon firm value is a function of the level of  $\alpha$  held prior to the tender offer. For very low values of  $\alpha$  prior to the takeover attempt, an increase in  $\alpha$  enables the target firm's shareholders to get a larger fraction of the benefits from a takeover. This is because if managers do not control any (or enough) votes, a tender offer can succeed even when the bidding firm would have been willing to offer a higher premium to acquire control. Increasing  $\alpha$  when its pre-tender offer level is relatively high has a negative effect on firm value, for when  $\alpha$  is high, firm value might be adversely affected to the extent that the probability of a hostile takeover attempt is

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<sup>2</sup> This is particularly true for firms requiring intensive investment of firm-specific human capital, or where managers' remuneration includes implicit promises of future payments.

<sup>3</sup> Stulz assumes here that the only way in which management can increase its bargaining power with the hostile bidder is through its control of voting rights. Other mechanisms such as introduction of a poison pill are ignored.

reduced; on the other hand, the premium offered in the event of a takeover attempt increases with  $\alpha$  when it is high. Thus, the value of the firm is positively related to  $\alpha$  for low levels of  $\alpha$ , and negatively related to  $\alpha$  for high levels of  $\alpha$ , so that there is a unique value of  $\alpha$  that maximizes firm value. A direct result of this model is that firm value is maximized for some positive level of  $\alpha$ , and minimized when management controls 50% or more of the firm's shares. At 50% managerial ownership, the probability of a value-increasing takeover recedes to zero. Contrary to the Jensen-Meckling (1976) suggestion of a positive monotonic relationship between  $\alpha$  and firm value for all ranges of  $\alpha$ ,<sup>4</sup> Stulz's reasoning predicts a curvilinear relationship between the two.

- Demsetz (1983) : Endogeneity of Ownership Structure

While the models of Jensen and Meckling (1976) and Stulz (1988), taken together, suggest a strong relation between managerial ownership and firm value, Demsetz (1983) offers a dissenting view in regard to the causality implied in the relationship. In his view, ownership structure is the outcome of an endogenous process of "...competitive selection in which various cost advantages and disadvantages are balanced to arrive at an equilibrium organization of the firm". He challenges the view that diffuse ownership is incompatible with the goals of profit maximization or firm value maximization. To Demsetz, the ownership structure likely to maximize firm value depends on firm-specific characteristics such as the firm's technology, the desired scale of operation, and the managerial skill of the potential owners of the firm. Thus, he views the prescription of any single ownership structure,

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<sup>4</sup> This is true only for all-equity firms.



without regard to the firm's operating environment, as being unsuitable for value maximization.

While Demsetz does not disregard the existence of agency problems between managers and the multitude of shareholders, he points to several mechanisms, both within the firm and without, that discourage managerial abuse of corporate resources. He argues that the presumed amorphous nature and passivity commonly ascribed to the majority of a firm's shareholders is deceptive in that when the need arises, dispersed ownership can congeal sufficiently to confront unsatisfactory managerial performance. This congealing of ownership can assume the form of a takeover, or initiation of a proxy contest by a group of once cooperating shareholders. He contends that since investors' economic behavior is dictated primarily by self-interest, "it is foolish to believe that owners of valuable resources systematically relinquish control to managers who are not guided to serve their interests" (p. 390). Furthermore, considerations such as investment of human capital, reputation in the labor market, and costs of raising new capital influence forbearance on the part of managers. In addition, when ongoing supervision of managers is partially provided by the firm's board of directors, and managerial wages are tied to corporate performance, the deleterious effects of agency relationships upon firm value are reduced to miniscule levels.<sup>5</sup>

To weaken the notion of separation between ownership and control prevalent in the literature, Demsetz provides statistics on the average fractional ownership of directors and management of the Fortune 500 firms during the period 1973-82. He

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<sup>5</sup> Ricardo-Campbell (1983) also mentions the role of internal auditing and external auditing in keeping an eye on management.

notes that but for the very largest firms, fractional ownership by top management is non-trivial. This implies that the separation of ownership and control, as a crucial premise of agency theory, is vastly exaggerated. Demsetz's arguments can be summarized thus:

- a) ownership and control are not completely separate;
- b) several firm-level and market-level mechanisms exist to mitigate agency costs of equity thus rendering them trivial in affecting firm value; and finally,
- c) inside ownership is endogenous with respect to firm-specific characteristics.

Accordingly, there should be no relation between inside ownership and firm value.

### **2.1.2 Empirical Literature**

Empirical literature on the relation between managerial ownership of equity and firm value provides mixed evidence. While Demsetz and Lehn (1985) and Holderness and Sheehan (1988) do not provide evidence of a significant relation between the level of insider holdings and firm value in accordance with Demsetz's (1983) arguments, Morck, Shleifer and Vishny (1988) and, more recently, McConnell and Servaes (1990) document a non-linear relationship between firm value and insider ownership of equity, in support of the agency arguments of Jensen and Meckling (1976) and Stulz (1988).

- Demsetz and Lehn (1985) : Corporate Ownership Structure

In line with Demsetz's (1983) argument, Demsetz and Lehn (1985) also argue that variation in corporate ownership structure occurs systematically in ways that are

consistent with value maximization. They run OLS regressions of alternative measures of ownership concentration upon variables such as firm size, instability of profit rate, whether or not the firm is a regulated utility or financial institution, and whether or not the firm is in the mass media or sports industry, for a sample of 511 large U.S. corporations for the year 1980. They find that each of the above variables is significant in explaining the cross-sectional variation in ownership structure. Demsetz and Lehn also empirically test the Berle-Means thesis that diffuseness of ownership structure impacts corporate performance adversely. Upon regressing the accounting profit rate for the original sample of firms on alternative measures of ownership concentration, they report no significant correlation. The Demsetz-Lehn study, therefore, provides evidence that is consistent with Demsetz's conclusions. A significant weakness of the Demsetz-Lehn study, however, is that in their measurement of ownership concentration, no effort is made to distinguish among the various constituents of ownership structure. As previously argued, different constituents may impact firm performance - and value - differently.<sup>6</sup>

- Holderness and Sheehan (1988): Role of Majority Shareholders

Holderness and Sheehan (1988) approach the issue of the relation between ownership structure and firm value from the standpoint of corporations with at least one shareholder whose beneficial interest in the firm is between 50.1% and 95% of the firm's equity. Their study, like the present one, is also motivated by the continuing debate in academic and public circles concerning the organizational role of the large-block shareholder. The public's aversion to ownership concentration, rooted in the "vague notion that the voting power of large-block shareholders somehow harms

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<sup>6</sup> Bergstrom and Rydquist (1990) also make this point.

small shareholders" (p. 318), is based on the belief that the amassing of ownership interest provides a vehicle for corporate wealth expropriation. The Holderness-Sheehan study, in focusing on majority shareholders to assess the relatively extreme effects of concentrated ownership, provides sufficient evidence to dispel the notion of any wealth expropriation attributed to the large shareholder. They find that the majority shareholders who are officers appear to be paid larger salaries than their counterparts in diffusely-held firms, but the differences are only marginally significant and economically small. The authors also find that majority shareholders are typically "insiders", in that they are "hands-on" managers rather than being mere monitors of the firm's management. Additionally, the identity of the majority shareholder is shown to be important, as firms in which the majority shareholders are individuals tend to underperform relative to their diffusely-held counterparts in terms of accounting rates of return and Tobin's Q ratios, while those where the majority shareholders are corporations do not. In a matched-sample comparison of investment policies, accounting rates of return, and Tobin's Q ratios between majority-held and diffusely-held firms, no statistically significant differences are found. These results also provide evidence consistent with the arguments of Demsetz (1983) and the empirical results of Demsetz and Lehn (1985).

- Morck, Shleifer and Vishny (1988) : Management Ownership and Firm Valuation

Morck, Shleifer and Vishny (1988) view the relation between ownership structure as an empirical question. They hypothesize that the relation between firm value and insider ownership is nonlinear due to two opposing forces that presumably govern managerial behavior and the dominating effects of one force over the other for particular ranges of fractional ownership by management. They argue that on the one

hand, a larger fractional interest of management in the firm's equity ensures a greater alignment of interests between managers and outside shareholders, as higher stakes make them less likely to squander corporate wealth. The "convergence-of-interests" hypothesis predicts that, *ceteris paribus*, larger managerial stakes should be associated with higher firm value. On the other hand, managers with sufficient voting power might take actions to secure their jobs at attractive salaries or, in general, pursue non-value-maximizing behavior without the punitive effects of market or non-market mechanisms impinging on them. This "entrenchment" effect can adversely affect firm value for some range of high ownership stakes.

To capture the presence of both "convergence-of-interests" and "entrenchment effects, Morck, et al. formulate a variety of piecewise linear regressions for a cross-sectional sample of 371 Fortune 500 firms during the year 1980. The results confirm non-linearity as implied by agency theory, with Tobin's Q (their proxy for firm value), rising as board ownership increases from 0% to 5%, falling as ownership increases to 25%, and rising again, albeit less steeply, as board ownership increases beyond 25%. There are several caveats that, by the authors' own admission, apply to the interpretation of these results. Firstly, the sample has a large-firm bias; this limits the generality of their conclusions. Then, the suggestion of entrenchment setting in around the 5% ownership level seems suspect. Finally, their suggestion of causality between managerial ownership and firm value also warrants circumspection. Overall, the results seem consistent with theoretical explanations for non-linearity, although the exact nature of the non-linearity appears to be less definitive.

- McConnell and Servaes (1990) : Equity Ownership and Corporate Value

McConnell and Servaes (1990) offer further evidence on the relation between the distribution of equity ownership across different constituents of ownership structure and firm value. They examine the relation between Tobin's Q and ownership structure over much larger samples of firms over two separate one-year periods, 1976 and 1986. They find a strong curvilinear relationship between Tobin's Q and the fraction of equity held by the firm's insiders. The relation is strongly positive for low levels of insider ownership, suggesting that positive effects dominate any negative effects. When insider ownership reaches between 40% and 50%, the curve slopes downward. The curvilinear relation is broadly consistent with the implications of the Stulz (1988) model. Stulz's prediction of the curve reaching its maximum prior to 50% insider ownership is borne out in the McConnell-Servaes study. However, contrary to Stulz's prediction of the firm value reaching its minimum at a 50% level of insider holdings, firm values for all positive levels of insider holdings are greater than when insiders own 0%. The McConnell-Servaes study also supports agency theory, although the exact nature of the non-linearity in the relationship is different from the one documented by Morck, Shleifer and Vishny (1988). However, this study too suffers from weaknesses that are similar to the Demsetz-Lehn (1985) study, where the distinctions across different constituents of ownership structure appear to be imprecise.

## **2.2 Large Block Shareholdings**

While the relation between ownership structure and firm value in the context of insider ownership and firm value has been the focus of much theoretical debate, the same is not true for the relation between large shareholders and firm value. Theoretical literature on this issue appears to be more unified. Empirical research regarding this relationship, however, is divergent and merits further investigation.

### **2.2.1 Theoretical Literature**

Theoretical literature on large blockholdings has approached the issue primarily from a corporate control standpoint. While blockholder monitoring has evolved as one of several institutions to resolve the agency conflicts between managers and shareholders, the motivations for monitoring emerge from the literature on corporate control. The models of Shleifer and Vishny (1986), Hirshleifer and Titman (1990) and Jegadeesh and Chowdhry (1988), while being marginally different in terms of framework setting, lead to the same qualitative prediction that stock price reactions to large block accumulations are a direct function of the size of the blockholding. Since the predictions of Shleifer and Vishny have the most far-reaching implications for the present study, a detailed review of their model is presented here.

- Shleifer and Vishny (1986) : Large Shareholders and Corporate Control

Shleifer and Vishny (1986) were the first set of theorists to ascribe a monitoring role to the large block shareholder. The roots of this role lie in the potential threat of takeover that large shareholders pose for incumbent management; this threat serves

as an efficient device in arresting aberrant managerial behavior. To the extent that monitoring is a "public good" and the private costs of monitoring are significant, there is little economic incentive for the fringe of small, atomistic shareholders to individually commit resources to monitoring when the value gains from their effort accrue to them only in proportion to their respective fractional interests in the firm. The Shleifer-Vishny model depicts the presence of a large shareholder as a partial solution to the problem of free ridership inherent in diffuse ownership structures. The large shareholder has sufficient incentive to monitor management due to his ability to capture a large fraction of the gains that accrue to him following a change in control. Since the relationship between benefits and costs of monitoring are acceptable to the large shareholder, the task of monitoring management becomes economically rational for him.<sup>7</sup> Since the large shareholder internalizes only the gains to his fractional ownership prior to the takeover, the level of monitoring provided is still suboptimal.

In the Shleifer-Vishny framework, as the proportion of shares held by the large shareholder increases, a takeover is perceived to become more likely, and the price of the firm's shares increases. The rewards for monitoring are realized either through a takeover, following which post-takeover improvements are implemented, or through other value-increasing mechanisms such as "booting" ineffective management by initiating proxy contests, or even through informal negotiations with management ("jawboning"). The Shleifer-Vishny model was the first to illuminate the idea that agency problems inherent in firms with diffuse structures need not necessarily be resolved through market mechanisms, or through an increase in managerial

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<sup>7</sup> Although monitoring is a "public good" created by private initiative, no altruistic motivations for the same are attributed to the large block shareholder.



ownership of the firm's equity. Large shareholder oversight of managerial performance has clear firm value implications.

- Hirshleifer and Titman (1990) : Share Tendering Strategies

The Hirshleifer-Titman (1990) model parallels that of the Shleifer-Vishny (1986) model except for some differences in the model setting. In the Shleifer-Vishny model, a tender offer always succeeds because the small shareholders tender their shares as long as the offer premium is commensurate with their expectation of post-takeover value increase, conditional on the offer being made. In contrast, Hirshleifer and Titman model the tendering decision of the marginal shareholders as essentially being random; thus, the success of the offer is uncertain. In their signalling-based model, the authors show that bidders' private information on firm valuation is revealed in a separating equilibrium, whereby bidders with low valuation bid low to separate themselves from high-gain bidders. An empirical implication of the model - similar to Shleifer-Vishny (1986) model - is that the probability of a tender offer's success is an inverse function of the number of shares required to obtain control, and a direct function of the initial size of the blockholding, and this is reflected in the stock price reaction to bid announcements.

- Jegadeesh and Chowdhry (1988) : Pre-Offer Tendering Strategies

The Jegadeesh-Chowdhry (1988) model, while differing in the specific setting of the framework from that adopted by Shleifer and Vishny (1986) and Hirshleifer and Titman (1990), offers empirical implications that are closely aligned with the other models. In this model too, the authors show that the size of the bidder's "footholding"

(or "toehold") is a signal of his or her expectation of post-takeover improvements, and that the stock market reaction impounds the information conveyed by the signal.

The above studies show that, regardless of the specific mechanisms for or consequences of large block purchases, a positive stock price reaction is expected. The predictions of the above models pertaining to large shareholders are, therefore, qualitatively the same.

### **2.2.2 Empirical Literature**

Empirical work by Holderness and Sheehan (1985), Mikkelsen and Ruback (1985), and Barclay and Holderness (1991) offers evidence to suggest that the market responds favorably to large block accumulations as a prelude to an eventual takeover attempt. Contrary to the valuation gains documented in these studies, McConnell and Servaes (1990) report no evidence of association between firm value and block ownership. Thus, empirical evidence on this relation is still unresolved.

- Holderness and Sheehan (1985) : Six controversial Investors

In their study of six highly visible and controversial investors, Holderness and Sheehan (1985) provide evidence of the value-enhancing actions of these investors. They find that contrary to their notoriety in reputation as "corporate raiders", these large shareholders use their voting power to effect a value-increasing restructuring in the target firms, as evidenced by several key performance measures, following their acquisition of control. While their reputation as "raiders" might be attributed to a negative public perception of their style of corporate governance, stock prices react

favorably to takeover announcements by these investors. No evidence of expropriation is found. The findings of this study are consistent with the theoretical models on large block shareholdings.

- Mikkelson and Ruback (1985) : Interfirm Equity Investment

Mikkelson and Ruback (1985) study the effects of corporations acquiring beneficial interests in excess of 5% of another company's shares. These investments initiate a process that may end with a takeover, targeted repurchase, takeover by a third party, or a disposition of shares. The results indicate a positive and statistically significant price response for both the target and acquiring firms at the initial announcement of 13D filings that are not takeover-motivated. The study further reveals that the target firm's shareholders benefit most when the initial footholding eventually leads to a completed takeover. Even when outcomes other than a takeover occur, the total valuation effect on the target firm is still positive and statistically significant. These results are consistent with theoretical predictions and reflect the positive synergy gains from corporate blockholdings.

- McConnell and Servaes (1990) : Large Blockholdings and Firm Value

The McConnell-Servaes study (1990), as it pertains to large shareholders, regresses Tobin's Q upon several alternative measures of large blockholdings, but finds no significant correlation. The findings provide no support for the predictions of Shleifer and Vishny (1986), indicating that blockholder oversight of management has no implications for firm value. Their study, however, suffers from a weakness in

that its classification of blockholders is ambiguous, and needs a finer classification scheme to distinguish between active and passive blockholders.

- Barclay and Holderness (1991) : Negotiated Block Trades

*to read*

Barclay and Holderness (1991) examine 106 negotiated trades involving at least 5% of the common stock of NYSE- and AMEX-listed firms. They view negotiated block trades as corporate control transactions even when these trades do not result in a full acquisition of the firm. The study documents a significant positive stock price reaction upon announcements of block trades. To the extent that a negotiated trade involves only a transfer, rather than a dissipation of shares, the identity of the blockholder is shown to be an important factor in the subsequent value of the firm. Even when the target firm remains independent, the block purchaser is shown to exercise sufficient authority to cause significant board turnover and effect a reorganization of the firm. The study provides convincing evidence that large block trades, on average, involve transfer of block ownership to individuals with greater monitoring and managerial skills and incentives. In summary, the Barclay-Holderness paper provides support for the theoretical models that imply positive effects of large block ownership upon firm value.

## 2.3 Institutional Holdings

While there is no theoretical model concerning the association between institutional blockholdings and firm value, owing possibly to the complications involved in modelling the effects of differing regulations that influence institutional

ownership, the theoretical arguments brought to bear on large shareholdings should apply to institutions as well. The evidence of the role of institutional presence in monitoring management is found to be mixed. Although the perception of "passivity" is still attached to institutions in academic and journalistic circles, there is growing anecdotal and empirical evidence of the change in institutional emphasis in relation to corporate governance.

### **2.3.1 Empirical Literature**

Empirical evidence on institutional ownership and its relation to firm value seems to be largely confined to the context of corporate control. No systematic evidence of this relation is found. While Jarrell and Poulsen (1987), Brickley, Lease and Smith (1988) and McConnell and Servaes (1990) show evidence that indicates a positive impact of their presence upon firm value, Pound (1988) finds evidence to the contrary.

- Pound (1988) : Proxy Contests and Shareholder Oversight

*to read!*

Pound (1988) presents conflicting incentives confronted by institutional investors and proposes three hypotheses of the relationship between corporate value and institutional ownership: (a) the efficient monitoring hypothesis, (b) the conflict-of-interest hypothesis, and (c) the strategic-alignment hypothesis. According to the efficient monitoring hypothesis, institutions, by virtue of their greater expertise, can monitor management at lower cost than small atomistic shareholders. Thus, this hypothesis predicts a positive relation between firm value and institutional ownership. According to the conflict-of-interest hypothesis, some institutions face

conflicts of interest between their fiduciary responsibilities to their stock beneficiaries and other objectives such as value maximization for the owners of the institution because of other profitable business relationships with the firm; they are therefore coerced into siding with management. The strategic-alignment hypothesis also suggests that management and institutions find it mutually advantageous to cooperate. Both hypotheses (b) and (c), then, predict a negative relation between firm value and institutional ownership. Pound finds that the probability of management prevailing in proxy contests increases with the fraction of equity held by institutions, a finding that is consistent with the conflict-of-interest and strategic alignment hypotheses.

- Jarrell and Poulsen (1987) : Shark Repellents and Stock Prices

Jarrell and Poulsen (1987) study the effects of shark repellents (antitakeover amendments) proposed between 1979 and 1985 upon the proposing firms' stock prices. The stock price reaction, on average, is shown to be significantly negative, thus suggesting that antitakeover amendments deter value-increasing takeover bids while serving as entrenchment devices for the incumbent management. A significant finding in the study is that the amendments that are most harmful to shareholder interests are more easily ratified when insiders dominate and institutions have a relatively small role. This finding is consistent with growing anecdotal evidence on the monitoring role of institutions.

- Brickley, Lease and Smith (1988) : Institutions and Voting on Antitakeover Amendments

Brickley, Lease and Smith (1988) provide evidence that is inconsistent with the notion that institutions tend to follow the "Wall Street Rule" of either voting with management or selling their stock in the case of policy differences. According to them, "the typical institutional owner is [not] a rubber stamp for management ..[nor] less critical of management than noninstitutional shareholders" (p. 274). In their study on voting patterns on anti-takeover amendments, they find that institutions vote more actively on anti-takeover amendments than do other shareholders, and also actively oppose management proposals that appear harmful to shareholders. This result is consistent with the efficient monitoring hypothesis of Pound (1988).

- McConnell and Servaes (1990) : Institutions and Corporate Value

McConnell and Servaes (1990) estimate the association between Tobin's Q and institutional ownership in a multivariate regression along with alternative measures of other constituents' holdings. They report a significant positive relationship between Tobin's Q and institutional ownership of a firm's equity. The findings of the McConnell-Servaes study are also consistent with the "efficient monitoring" hypothesis of Pound (1988).

Empirical work concerning the place of institutional ownership in the ownership structure seems limited to the context of corporate control. However, as the above review reveals, there are some decisions where institutions are aligned with managers, and others where they are aligned with shareholders. While this body of

evidence diminishes the traditional depiction of institutions as passive investors in the literature, it does not clearly establish the presence of institutional blockholdings as a significant determinant of firm value. Thus, in this context, the present study attempts to examine the association between firm value and institutional ownership.

The above review of literature indicates a lack of definitive evidence on the issue of the association between ownership structure and firm value. As observed earlier, theoretically, the issue remains unresolved. Empirical literature, while increasingly improving in methodological rigor, suffers from limitations arising from imprecise and ambiguous measurements of the different constituents of ownership structure. This dissertation, through its selection of a set of data sources, criteria, and procedures for validation, attempts to resolve some of the ambiguities in previous findings that result from measurement weaknesses. In a larger sense, it attempts to empirically examine the monitoring role of the large shareholder as envisaged by Shleifer and Vishny (1986).



## Chapter 3

### *Gains from Blockholdings and Valuation Consequences of New Block Creations*

A risk averse blockholder incurs loss-of-diversification costs in acquiring a block of shares, in view of the value of foregone opportunities for portfolio diversification. Therefore, the decision to hold a block is rational only if there are benefits or returns that are commensurate with the additional risk borne by the blockholder. This chapter discusses the potential sources of gains to the blockholder as well as the valuation consequences of new block formations. While some gains to the blockholder may result from value-increasing changes in firm characteristics and may be shared by the remaining shareholders, other gains may accrue solely to the blockholder and be value-reducing.<sup>8</sup>

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<sup>8</sup> Although not considered in this study, one possible source of gain to the blockholder emerges from the private benefits of control. This hypothesis is advanced and directly tested for by Barclay and Holderness (1991).

### **3.1 Value Increasing Gains to Blockholder**

The potential sources of gains resulting from an increase in the firm's stock price are as follows.

#### ***3.1.1 Reduction in Agency Cost of Free Cash Flow***

The agency cost of free cash flow, postulated by Jensen (1986), is an important component of the agency costs of equity. Free cash flow is defined as the cash flow in excess of that required to fund all positive net present value projects. Jensen's free cash flow hypothesis suggests that managers of firms generating substantial free cash flow have incentives to make the firm grow beyond its optimal, value-maximizing size. In addition to the psychological benefits of self-aggrandizement, the growth maximization strategy may bring with it pecuniary benefits in the form of increased compensation to managers. Conflicts of interest may arise between managers and shareholders regarding the disposition of free cash. While shareholders may prefer the free cash to be paid out in the form of dividends or repurchases, or be used to restructure the firm's debt, managers might prefer to invest in negative net present value projects rather than disgorge free cash for the shareholders' benefit. The monitoring provided by large blockholders can reduce this conflict of interest associated with undistributed cash by ensuring that managers bond themselves against any misuse of free cash by increasing the firm's leverage. The resultant increase in debt financing effectively limits managers' discretionary power over the firm's investment opportunities. Consequently, firms with high free cash flow are more likely to attract new large block formations and the

stock price response is expected to be a direct function of the magnitude of free cash flow in the firm.

### ***3.1.2 Reduction in Non-Free-Cash-Flow Equity Agency Costs***

Jensen and Meckling (1976) have theorized that firms in which the fractional ownership of managers is low are burdened with greater agency costs of equity because of improper alignment of interests between managers and the remaining shareholders. In the absence of firm-based mechanisms, such as the design of a compensation package of which a significant component is performance-based, managers are likely to expropriate corporate resources in the form of excessive consumption of perquisites. Demsetz (1983), too, argues that managerial consumption of on-the-job amenities might include abnormally high salaries and excessively large firms; Murphy (1985) provides evidence that supports the Demsetz argument.

The excessive consumption of corporate perks possibly accompanying low inside ownership is not, however, the only source of conflict between managers and shareholders. A subtle but more harmful effect of this agency relationship upon firm value may be caused by managerial shirking [Jensen and Meckling (1976)], or by managerial risk aversion and its attendant impact upon the firm's investment policies. Easterbrook (1984) suggests that managers who are not well-diversified and have a substantial portion of their personal wealth invested in the firm may seek out those investment opportunities that are likely to lower the asset risk of the firm. For leveraged firms, this entails a transfer of wealth from shareholders to existing bondholders who "receive their contracted-for interest, but escape the contracted-for

risk". It can be argued that either of the above forms of equity agency costs is more likely to manifest itself in firms with high firm-specific risk. To the extent that managerial behavior is less observable in firms with high firm-specific risk, the higher the firm-specific risk, the greater the potential for managerial abuse of the firm's resources, the greater the need for blockholder monitoring.

### **3.1.3 Equity-Value Increasing Wealth Transfers from Bondholders**

A source of gain to large block shareholders lies in the potential for wealth transfers from bondholders [Jensen and Meckling (1976), Smith and Warner (1979)]. Stockholders can expropriate wealth from bondholders by investing in high-risk projects, as may best be viewed by considering them as the holders of a call option on the value of the firm, maturing when the debt matures and with exercise price equal to the face value of debt. The bondholders may be viewed as purchasing the assets of the firm from the stockholders and issuing a call option (equity) on these assets. In the option pricing framework, the value of this call option increases with the variance of the cash flows generated by the underlying assets. Hence, stockholders can increase the value of their equity by manipulating the firm's assets to facilitate their investment in high-risk projects. Bondholders, in recognizing such incentives, protect themselves through covenants in the bond indenture. Asquith and Wizman (1990) categorize bond covenants with regard to the extent of *ex-ante* protection they afford the bondholders. While the Asquith-Wizman classification of bond covenants according to their stringency may not be theoretically taut, in general, the less stringent the bond covenants, the greater the opportunities for wealth transfer, the more attractive the firm to the blockholder, and thus, the stronger the positive price reaction to a new block announcement.

Due to constraints on the availability of covenant data for small firms in the sample, this study uses an alternative proxy for the potential for wealth transfers from bondholders to stockholders. Prowse (1990) suggests that the proportion of discretionary assets in the firm can be used as a reasonable proxy for the wealth-transfer potential. He defines discretionary assets to include all assets other than gross fixed assets on the firm's balance sheet. Since discretionary assets can be manipulated by managers to increase the firm's risk, firms with a high proportion of these assets are more likely to attract blockholders. While the blockholder's presence may exacerbate wealth expropriation from bondholders, it can also serve to correct for risk aversion on the part of managers, as previously discussed. In any case, irrespective of whether the wealth transfers result from exploitative or corrective decisions engendered by the blockholder's influence, a positive stock price reaction is expected.

#### ***3.1.4 Expectation of Synergy Gains in the case of Corporate Blockholders***

When the blockholder is a corporation, a possible source of gain may arise from the synergistic possibilities that presumably follow an interfirm investment. The synergies may assume the form of access to the target firm's technology, or be operating<sup>9</sup>, financial, or managerial in nature.<sup>10</sup> Evidence provided by Mikkelsen and Ruback (1985) also suggests a positive valuation impact of the announcement of interfirm investments. Thus, the identity of a blockholder as a corporation is expected to elicit a positive stock price reaction.

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<sup>9</sup> Vertical integration and economies of scale are good examples.

<sup>10</sup> For details see Chapter 8 in Weston, Chung and Hoag (1990).

## **3.2 Value-Reducing Gains to Blockholders**

The following possible gains accrue to the large block shareholder at the expense of the remaining shareholders and are likely to be value-reducing :

### ***3.2.1 Insider Trading***

Demsetz (1986) argues that a secondary source of compensation for monitoring by the blockholder is the opportunity for insider trading. He holds that firms operating in noisier environments, ie. those with higher firm-specific risk, offer greater potential for insider trading. However, Demsetz also points out that the gains from insider trading accrue solely to the blockholder, and at the expense of the small shareholders because of the privileged access of the former to the firm's inside information. This source of compensation to the blockholder is perceived as a "cost" by the small shareholders. Thus, the greater the firm-specific risk, the greater the information asymmetry between managers and shareholders, the greater the potential for insider trading, and the greater the cost borne by the small small shareholder. The potential for insider trading, therefore, is likely to be value-reducing.

### ***3.2.2 Equity-Value Reducing Expectation of Greenmail Premium***

One of the several ways by which incumbent management seeks to retain control of the firm is through greenmail. Essentially, the term connotes the negotiated repurchase of a large block of shares from an individual or a subset of shareholders at a premium by the target firm's management. The purpose of the premium

buyback, typically, is to end a hostile takeover threat by the blockholder or greenmailer. Often in connection with greenmail, a standstill agreement is written in which the blockholder who is bought out agrees not to make further investments in the firm for a specified period of time. Greenmail primarily serves as an entrenchment device, and thus, represents a contradiction to the notion of monitoring. The premium over the fair market value of shares is a gain appropriated solely by the blockholder. Empirical support for the valuation consequences of greenmail transactions is well-documented. Dann and DeAngelo (1983) and Bradley and Wakeman (1983) report average abnormal returns of -1.76% and -2.85%, respectively, on the repurchasing firm's stocks. The Dann-DeAngelo (1983) study also reports an average premium of 16.4%.<sup>11</sup> Thus, the expectation of a greenmail premium serves as an incentive to acquire a large block of shares, even though the greenmail transaction, ultimately, is value-reducing.

### **3.3 Hypothesis**

Based on the foregoing discussion, the net valuation impact of new block creations on the target firm's stock is expected to be positive. Hence, the first hypothesis is:

**H 1: Announcement excess returns are positive for new block formations.**

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<sup>11</sup> For a detailed discussion see Weston, Chung and Hoag (1990).

### 3.4 Sample selection process

In order to test the hypothesis above, a sample of firms for which new blocks are formed during the period 1984-1986 is obtained by examining CDA Investment Technologies' Spectrum 5. Spectrum 5 is a monthly publication that lists the names and percentage holdings for each beneficial owner of at least 5% of the outstanding stock of any publicly traded corporation on a cumulative basis. Since beneficial owners exercise voting authority and possibly investment discretion, the Securities and Exchange Commission (SEC) mandates timely disclosure of ownership through the filings of Schedules 13D and 13G. These filings are available almost immediately in the SEC's public record room and the public presumably first learns of new block purchases from these filings. Spectrum 5 then compiles and cumulatively reports all filings at the end of each month. For inclusion in the sample, a firm must meet the following preliminary criteria:

1. The firm must have only new blocks created during the period of study. Any firm with even a single blockholding at any point during the three years prior to the period of interest is excluded from the sample. This provides a "cleaner" opportunity to study the firm characteristics that cause a new block creation for firms that did not have any previous external blockholdings.
2. Only firms with blockholdings that are between the 5% and 50% levels are included. The lower bound ensures that the definition of a block in this study is consistent with that of the SEC. The upper bound ensures the exclusion of majority-held firms, as majority shareholders are most often insiders [Holderness and Sheehan (1988)]. Furthermore, acquisition of a beneficial interest in excess



of 50% should more appropriately be viewed as a takeover and not merely a blockholding.

3. The chosen firm must be included on Standard and Poor's COMPUSTAT II computer tape over a window of at least 3 years prior to and 2 years following the year of a block formation. This is to facilitate a time-series analysis of the potential changes in characteristics of the firms in the sample.
4. For firms included in the sample, the identity of the blockholder must not change for at least 2 years following the formation of the block. This is ensured by examining annual issues of Spectrum 5 for 2 years subsequent to the year in which the block was first formed. This criterion facilitates an *ex-post* analysis of the hypothesized effects of monitoring.
5. In order to ensure that the blockholder is neither an insider nor one with insider affiliation, the identity of the blockholder for a given firm is matched against the data on insider holdings provided in Spectrum 6. For inclusion in the sample, a given firm's blockholder must not be an insider according to Spectrum 6. That is, any blockholder classified as "officer" or "officer and director" in Spectrum 6 is considered an insider. This criterion ensures that the blockholding is external, and therefore the changes in corporate value reflect the effects of the external block formation.
6. The sample firms must have daily price and stock return data available for at least 2 years prior to and 2 years following the date of the block acquisition.

7. The sample firms must have no data missing for any of the independent variables in the cross-sectional regression, to be discussed in Chapter 4, for at least 3 years prior to and 2 years following the new block creation.

A primary sample of 330 firms from a variety of industries is obtained over the sample period by examining the January issues of Spectrum 5 in the years 1985-87. Since there is a small time lag between the filing of Schedules 13D and 13G with the SEC and its eventual publication in Spectrum 5, the January issues include information about new block creations in late December that were not reported in the preceding December issue. However, upon imposing the above criteria, 92 firms survive to comprise the final sample. Table 1 provides some description about the temporal distribution of new block creations during the period 1984-86, across the sample of 92 firms. It also provides details about new block formations according to the identity of the blockholder and the exchange on which the stocks are traded. Most block creations occurred in the years 1984-85. Over two-thirds of the sample consists of institutional blockholders, while corporate and individual blockholders comprise about 16% each. Further, nearly two-thirds of the firms that attracted new blocks trade on the NASDAQ, while about one-third of the firms trade on the New York Stock Exchange or the American Stock Exchange.

### **3.5 Methodology**

In contrast with the conventional use of daily returns to carry out event studies, this study employs weekly returns by compounding daily returns over 5 trading days, both for the individual firms in the sample and the value-weighted market portfolio. The use of weekly returns is deemed more appropriate in this study due to the presence

of several small firms in the sample for which trading is infrequent. This adjustment is intended to ensure greater statistical confidence in the results. The stock price reaction to the announcement of new block formations is analyzed using the event-study methodology [Brown and Warner (1985)] and CRSP Daily Return File data. The excess return,  $AR_{it}$  on stock  $i$ , in week  $t$  around the announcement date is estimated during the event period using the market model of security returns, as follows:

$$AR_{it} = R_{it} - a_i - b_i R_{mt}$$

where  $R_{it}$  and  $R_{mt}$  are the week-  $t$  returns on stock  $i$  and on the value-weighted market index, respectively. The announcement date is the earlier of any public announcement in the **Wall Street Journal** and the date of the SEC filing. Few firms in the sample are large enough for the news of new block purchases to be carried by the **Wall Street Journal**. Thus, for most firms, the primary source for the event date is the date of the filing reported in Spectrum 5. The coefficients  $a_i$  and  $b_i$  are the Ordinary Least Squares (OLS) estimates of the intercept and slope of the market model regression:

$$R_{it} = a_i + b_i R_{mt} + \varepsilon_{it}$$

run over a 50-trading week control period spanning from week -55 to week -6, the event occurring in week 0 (corresponding to days -4 through 0).  $\varepsilon_{it}$  is the model residual for security  $i$  in period  $t$ . Average excess returns, (AER's), are calculated for each week in the test period from week -5 to week +5, by taking a cross-sectional average of all the securities' excess returns for the week. That is,

$$AER_t = \sum_{i=1}^N \frac{AR_{it}}{N}$$

where N is number of firms in the sample. According to Brown and Warner (1980), since residual cross-correlation in event time is likely to be small in the absence of event clustering, significance tests on the AER's can be carried out under the assumption that residuals are uncorrelated across securities. This facilitates the use of the t-statistic in testing for the significance of AER's. The t-statistic is calculated by dividing the AER's by their standard deviation, which is estimated using the time series of AER's over the control period (week -55, week -6). For week 0, specifically, the t-statistic is given by:

$$\frac{\frac{1}{N} \sum_{i=1}^N A_{i0}}{\left( \sum_{i=1}^N \left[ \frac{1}{48} \sum_{t=-55}^{-6} \left( A_{it} - \left( \sum_{t=-55}^{-6} \frac{A_{it}}{50} \right) \right)^2 \right] \right)^{1/2}}$$

Thus, assuming the normality and independence of the  $AR_{it}$ 's, the t-statistic above has 49 degrees of freedom.

A test is also conducted to measure whether the proportion of negative excess returns on a given day in the test period is significantly different from its expected value proxied by the actual average proportion of negative excess returns over the control period week -55 to week -6. This test indicates whether the negative AER

obtained in any week is the result of a significantly high proportion of negatives excess returns for the week, or is driven merely by a few large outliers. The standard test for proportions based on the normal approximation to a binomial distribution of the signs of the excess returns is used to estimate the Z-statistic.

$$Z(PRNEG_t) = \frac{PRNEG_t - p^*}{[p^*[1 - p^*]/N]^{1/2}}$$

where  $PRNEG_t$  is the proportion of negative excess returns on day  $t$ .

$p^*$  is the expected value of  $PRNEG_t$ , defined as the average proportion of negative excess returns over the control period.

The estimates of the average excess returns and the proportions of negative excess returns, along with their accompanying significance tests, provide evidence on the validity of the central hypothesis in this chapter, **H 1**.

### **3.6 Discussion of Results**

Table 2 presents the results of the event study analysis around the announcements of new block formations by the sample firms. AER's are measured over a window extending from 5 weeks prior to the block formation to 5 weeks following the same. The pre-announcement average excess returns during weeks -5 through -1 are small in magnitude and consistently insignificant. Thus, on average, there appears to be no leakage of information preceding the new block purchases. The stock price reaction is centered on the week 0 AER. Consistent with the

hypothesis in this study and the findings of several other studies, the week 0 average excess return is a positive 1.94% and significant at the 1% level of significance, suggesting a notable increase in shareholder wealth. Only in week 0 is it significant. Further, inspection of the proportion of negative AER's in week 0 reveals that a statistically significant 59% of the AER's are positive. Hence, it is clear that the results are not driven by the presence of large outliers. In the post-announcement period from weeks +2 through +4, the proportion of negative AER's gradually increases so that in week +4, 59% of the AER's become significantly negative. This evidence, along with a progressive dissipation in the positive reaction, may indicate the market's perception of the receding possibility of an acquisition by the new blockholder(s). However, the overall evidence of a positive announcement effect is consistent with the market's expectation of the impact of monitoring in correcting the mis-alignment between managers' interests and those of the shareholders and its attempt to immediately capitalize the hypothesized gains in firm value.

## **Chapter 4**

### ***Cross-Sectional Relation Between Announcement Reaction and Firm and Block Characteristics***

#### **4.1 Hypotheses**

In Chapter 3, the possible sources of gains to the blockholder and the valuation consequences of new block creations were discussed. As the valuation impact of new block formations has already been documented in the previous chapter, this chapter seeks to analyze those factors that are likely to impact the announcement reaction significantly.<sup>12</sup> While some factors are related to firm characteristics, others are related to those of the block. Therefore, based on the discussion in the preceding chapter, the following empirically testable hypotheses emerge.

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<sup>12</sup> The issue of greenmail is ignored here because this study focusses on monitoring, rather than the possibility of takeover.

#### **4.1.1 Firm-Related**

**H 1: Announcement excess returns are positively related to the pre-announcement level of free cash flow, FCF, as proxied by the mismatch between undistributed cash flow and the market-to-book (MB) ratio.**

Jensen's (1986) theory of free cash flow posits the agency cost of free cash flow as an important component of equity agency costs. Free cash flow is defined as the mismatch between undistributed cash and the firm's investment opportunities. The MB ratio serves as a proxy for investment opportunities, so that higher MB ratios indicate more valuable investment opportunities. Managers may have a propensity to invest undistributed cash in non-value-maximizing projects instead of distributing it to the firm's shareholders. Thus, the greater the level of undistributed cash and the lower the MB ratio, the greater the mismatch between free cash and the firm's investment opportunities, the more severe the agency costs of free cash flow, and the greater the need for blockholder monitoring.

**H 2: Announcement excess returns are directly related to the potential for wealth transfers from bondholders, as proxied by the level of discretionary assets in the firm (AD).**

Shareholders can expropriate wealth from bondholders by investing in high-risk projects, since the payoffs from this strategy can be substantial on the upside but truncated to zero on the downside, in view of the limited liability feature of equity ownership. In some cases, however, the transfer of wealth may be the result of blockholder influence serving to correct for risk aversion on the part of managers.



This risk aversion may possibly induce managers to choose such low-risk projects that the resultant risk characteristics of the firm's asset base may not be commensurate with what the bondholders had contracted for. Thus, wealth transfers from bondholders may result either from the exploitative [Jensen and Meckling (1976), Smith and Warner (1979)] or the corrective [Easterbrook (1984)] facet of large shareholder presence. Because discretionary assets can be used to increase asset risk [Prowse (1990)], the level of discretionary assets in the firm is used as a debt agency cost proxy variable. The greater the level of discretionary assets in the firm, the greater the potential for wealth transfers from bondholders to stockholders, the stronger the stock price reaction to large block acquisitions.

#### **4.1.2 Block-Related**

Additional hypotheses that emerge from the literature on block size and identity of the blockholder are:

**H 3: Announcement excess returns are positively related to the size of the blockholding (SIZE).**

For new block acquisitions, block size indicates the extent to which the blockholder represents a source of countervailing power with respect to incumbent management. *Ceteris paribus*, then, the larger the size of the block, the more effective the monitoring, and, consequently, the larger the gains to the shareholders. Empirical implications of the theoretical models on large shareholdings by Shleifer and Vishny (1986) and Hirshleifer and Titman (1990) are that the initial size of the block ("footholding") has valuation implications, since the probability of a successful

takeover is directly related to the size of the footholding. Alternatively, for firms with takeover blocks, Jegadeesh and Chowdhry (1988) suggest that the size of the block is a signal of the acquirer's assessment of the value of potential synergy gains from a takeover. Thus, low footholdings signal low post-takeover gains. The qualitatively similar predictions of the above models suggest a positive association between excess returns and block size.

**H 4: Announcement excess returns are positively related to the identity of the blockholder as a corporation (CORP).**

Barclay and Holderness (1991) show that the identity of the blockholder, not just the size of the blockholding, is also important in affecting firm value. In order to examine the relative market reactions to the identity of the blockholder, a dummy variable (CORP) is used to indicate that the blockholder is a corporation. In view of the market's *ex-ante* belief regarding value gains arising from possible synergies that may benefit both the corporate blockholder and the target firm, the market reaction is hypothesized to be positively related to the identity of the blockholder as a corporation.

## **4.2 Empirical Questions**

### **4.2.1 Institutional Blockholders**

Since one of the objectives of this study is to distinguish between the relative valuation consequences of block purchases by different classes of blockholders, an additional dummy, INST, is used to indicate that the blockholder is an institution. This

ensures that dummies CORP and INST span the entire set of possibilities with regard to the identity of the blockholder. While the relation between announcement reaction and CORP has been argued to be positive, there is no theoretical basis, *a priori*, to hypothesize that block purchases by institutions should elicit more favorable price responses than those by individuals. For some decisions, institutions appear to be aligned with managers, while for others, they appear to side with the shareholders. Since empirical evidence on the issue is also mixed, the relation between announcement reaction and the identity of the blockholder as an institution is an empirical question.

#### **4.2.2 Firm-Specific Risk**

Firms with higher firm-specific risk are more likely to have equity agency problems due to the increased potential for non-value-maximizing behavior by managers. The costs imposed on the firm might assume the form of unrestrained consumption of perquisites or the selection of relatively "safe" projects that may not be value-enhancing, *ex-post*. The presence of a large blockholder can serve to deter such self-interested behavior of management. Thus, the greater the firm-specific risk, the greater the need for blockholder monitoring. However, according to Demsetz (1986), the the higher the firm-specific risk, the greater the opportunity for insider trading at the expense of the small shareholders, and thus, the higher the cost to the small shareholders. Clearly then, the above arguments render the issue of the relation between excess returns and firm-specific risk open to empirical resolution. Thus, the relation between firm-specific risk, as proxied by the residual variance of the market model (VARES) and announcement excess returns is left as an empirical question.

### 4.3 Variable Definition and Measurement

Data for the independent variables is collected and measured as follows.

FCF is the mismatch between the firm's cash flow and its investment opportunities. Firms with high cash flow and poor investment opportunities are described as high free cash flow firms. Lehn and Poulsen (1989) provide a measure of undistributed cash flow, CF, as follows:

$$CF = INC - INTEXP - TAX - PFDDIV - COMDIV$$

*INC* = Operating Income Before Depreciation (COMPUSTAT # 13)

*INTEXP* = Gross Interest Expense (COMPUSTAT # 15)

*TAX* = Total Non-deferred Income Tax (COMPUSTAT # 16)

*PFDDIV* = Total Preferred Stock Dividend Requirement (COMPUSTAT # 19)

*COMDIV* = Total Dividends Declared on Common Stock (COMPUSTAT # 21)

This represents post-tax cash flows that are not distributed to the firm's security holders. Each firm's undistributed cash flow is scaled by its book value of total assets,  $CF/ASSET$ , to obtain FCF. Investment opportunities for the firm are best measured by its average Tobin's Q [Lang and Litzenger (1989), Lang, Stulz and Walkling (1991)], defined as the ratio of the market value of the firm's assets to their replacement cost. Due to data availability problems associated with the computation

of Tobin's Q ratio for the small firms in the sample, this study uses the market-to-book (MB) ratio as a reasonable proxy for the firm's investment opportunities. Although the MB ratio is admittedly a noisier proxy for the firm's investment opportunities than Tobin's Q, the order of correlation between the two measures has been shown to be about 0.9. The MB ratio has similarly been used by Dierkens (1990), Smith and Watts (1991) and Denis (1991). Generally, higher MB ratios are associated with greater investment opportunities. The MB ratio is measured as follows:

$$MB = \frac{(STDEBT + LTDEBT + PREF + EQUITY)}{ASSET}$$

*STDEBT* = Book value of Debt in Current Liabilities (COMPUSTAT # 34)

*LTDEBT* = Book Value of Long-Term Debt (COMPUSTAT # 9)

*PREF* = Carrying Value of Preferred Stock (COMPUSTAT # 134)

*EQUITY* = Market Value of Common Equity (COMPUSTAT #'s 24 times 25)

*ASSET* = Book Value of Total Assets (COMPUSTAT # 6)

It must be noted that this study includes short-term debt in its definition of the MB ratio when most studies do not. This is done because the sample consists of several small firms that, due to the relative inaccessibility of capital markets, might resort to short-term borrowing from banks. Thus, the book value of this short-term borrowing, in the form of notes payable, must be included in the definition of the MB ratio in order to ensure cross-sectional consistency.

Based on the above arguments, the variable FCF is used as a qualitative variable in this study. It is represented as the mismatch between the three-year average of the undistributed cash flow scaled by total assets (CF/ASSET) prior to the year of the block formation, and growth opportunities proxied by the three-year average of the MB ratio over the same period. The higher the average undistributed cash flow prior to the year of the new block formation and the lower the MB ratio, the higher the magnitude of free cash flow, and consequently, the greater the managerial propensity to overinvest in non-value-maximizing projects. Such firms are likely to have the most severe agency costs of free cash flow. Accordingly, for firms with CF/ASSET above the industry median and MB below the industry median, FCF takes a value of 1. For all other firms, FCF takes the value of 0. Given that reduced managerial discretion over free cash flow is potentially valuable for the firm, the greater the free cash flow, the greater the valuation effects of large block shareholder presence. The coefficient of FCF is expected to be positive. All data used to measure FCF is obtained from the Industrial Compustat Tape.

Following Prowse (1990), debt agency cost proxy, AD, representing the level of discretionary assets in the firm is defined as follows:

$$AD = 1 - \left[ \frac{GrossFixedAssets}{TotalAssets} \right]$$

It is measured as a three-year average prior to the year of the new block formation. To the extent that the existence of discretionary assets in the firm is likely to be exploited for variance-increasing purposes [Jensen and Meckling (1976), Smith and Warner (1979)], or for relatively easy disposition or transformation by the firm's managers, AD represents the potential for wealth transfers from bondholders to

stockholders due to intrinsic firm characteristics. Consequently, the larger the magnitude of AD, the greater the potential for wealth expropriation through asset risk shifts and leverage increases, the more positive the stock price reaction to the announcement of a new block creation. The coefficient of AD is expected to be positive. Data required to compute AD is obtained from the Industrial Compustat Tape. Finally, it may be noted here that while several studies [Bradley, Jarrell and Kim (1984), Prowse (1990)] also use the ratio of the research & development (R & D) expenditure to the firm's sales as a proxy for the agency cost of debt, data limitations due to the presence of several small firms in the sample preclude its use in this study.

SIZE measures the percentage holding(s) of the block purchaser(s) on the date of the first new block purchase. Data for this variable is obtained from the January issue of Spectrum 5 following the year in which the block was first purchased. When there is more than one block purchased on the first date, the holdings of all block purchasers are summed to obtain the SIZE variable. This assumes that all first-time blockholders, regardless of whether they are coalitions acting collectively or unaffiliated entities acting independently, have the same level of motivation and skill in performing the monitoring function.

Data on dummy variables CORP and INST are also obtained by examining Spectrum 5. The definition of a corporation, in the context of this study, includes any publicly-owned non-financial business entity. CORP takes a value of 1 when the blockholder is a corporate entity, and 0 otherwise. The definition of an institution includes any firm in the financial business, and covered in CDA Technologies' Spectrum 4. Thus, institutional blockholders include banks, savings and loan

associations, mutual savings banks, credit unions, life insurance companies, pension funds, investment companies and mutual funds. INST takes a value of 1 when the blockholder is an institution, and 0 otherwise. Therefore, values of 0 for both dummy variables CORP and INST indicate that the blockholder is an individual.

VARES is the residual variance of the market model, estimated by regressing the firm's weekly return on the average return on the value-weighted market portfolio over 50 trading weeks prior to the year of the block formation. This variable proxies for the noisiness of the firm's environment or firm-specific risk. Data required to estimate VARES is obtained from the CRSP tapes.

#### **4.4 Descriptive Statistics**

In order to establish, *ex-ante*, the need for large shareholder monitoring, it is essential to compare the pre-block characteristics of firms with new blocks to those of firms without. This is accomplished by generating a control sample to account for possible industry- or economy-wide factors. The selection of the control firm is carried out as follows:

1. Each firm with an external blockholder is paired with a firm with no external blockholders during the period of interest. The matching is done on the basis of the 2-digit SIC code, and firm size as measured by total assets in the year prior to that of the new block formation. Clearly, for inclusion in the control sample, the firm must not be covered in Spectrum 5 during the period of study.



2. The control firm must have daily stock price data available for at least 2 years prior to to 2 years following the date of the block acquisition.
3. The control firm must be included in COMPUSTAT II over a window extending from 3 years before to 2 years after the date of the blockholding.

Firms for which control firms are not found are finally eliminated from the sample. This procedure results in a set of 57 firms from the original sample and 57 firms in the control sample during the three-year period from 1984-86.

Table 3 provides descriptive statistics on the characteristics of sample and control firms. Since both sample and control firms' distributions are highly skewed, medians, rather than means, are analyzed in order to minimize the influence of outliers. As is evident from the table, the sample and control firms' characteristics are very similar. The median firm size for the sample firms is \$54.42 million, while that for the control firms is \$73.10 million, suggesting that firms that attract large blocks are typically smaller than other firms in the industry. Additionally, the examination of key performance measures and operating variables suggests marginal differences, but no definitive need for large shareholder oversight. While the median Market-to-Book (MB) ratio is 1.13 for the sample firms, it is 1.00 for the control firms. Accounting returns, on the other hand, are lower for the sample firms than for the control firms, suggesting some potential for improvement in firm profitability for the former. In regard to operating variables, the median undistributed cash as a percentage of total assets for the sample and control firms is 5.8% and 5.6%, respectively. Discretionary assets, as a proxy variable for debt agency costs, appear to comprise a significant portion of the assets of both sets of firms; the median levels for the sample and control firms are 55.5% and 54.3%, respectively. Consistent with

the arguments made earlier, undistributed cash flow and discretionary assets appear - albeit weakly - to be factors that might potentially attract blockholdings. Table 3 also suggests that corporate blockholdings are on average, the largest among the different types of blockholdings.

## 4.5 Model Specification and Methodology

The hypothesized cross-sectional relationships discussed earlier are estimated by running a regression of the week 0 excess returns on the variables proxying for firm characteristics, blockholder type, and block size. The statistical model is specified as follows:

$$AR_{i0} = \beta_0 + \beta_1FCF + \beta_2AD + \beta_3SIZE + \beta_4CORP + \beta_5INST + \beta_6VARES + \delta_i$$

All variables are as previously defined. The signs of the coefficients of regressors are hypothesized to be:

$$\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 ?, \beta_6 ? .$$

## 4.6 Discussion of Results

Results of the OLS regression model estimating the cross-sectional association between the regressors described earlier and announcement excess returns are displayed in Table 4. The R-square and adjusted R-square for the model are 42% and

37%, respectively. In regard to free cash flow, the regression results indicate a negative, although insignificant, impact of FCF upon announcement returns. This suggests that the market does not perceive blockholder oversight in reducing the agency costs of free cash flow as being significantly value-increasing.<sup>13</sup> AD, measuring the level of discretionary assets in the firm and serving as a proxy variable for debt agency costs, enters the regression at the 5% level of significance (t-statistic 2.350). This finding suggests that new block formations engender wealth transfers from bondholders. However, the results cannot distinguish whether wealth transfers are dictated by motivations for expropriation or are associated with a blockholder-induced adjustment for managerial risk aversion.

The association between the SIZE variable and the AER is the strongest among all the variables and enters the regression most significantly. The results show that for every 10% increase in block size, the price reacts upward by 4%. This suggests that regardless of the intention of the block acquisition, a larger block size is perceived as being value-increasing. This explanation is consistent with the predictive model of Shleifer and Vishny (1986) advocating the role of large shareholder monitoring in aligning managerial interests with those of the small shareholders, as well as the signalling models of Hirshleifer and Titman (1990), and Jegadeesh and Chowdhry (1988). CORP also enters the regression significantly at the 5% level. The positive relation between CORP and excess returns is consistent with the market's belief that interfirm equity investments are likely to result in synergistic gains in the future [Mikkelson and Ruback (1985)]. With regard to the monitoring incentives and skills of corporations relative to individual blockholders,

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<sup>13</sup> Several alternative models using industry means, sample means, and sample medians as criteria for defining the dummy variable FCF are also tested. The results are qualitatively identical and thus, are not reported here.

this evidence is also consistent with the findings of Holderness and Sheehan (1988), for in their study on majority shareholders they report that firms in which individuals are majority shareholders tend to underperform relative to their diffusely-held counterparts, while the corporate majority shareholder firms do not.

Of the two empirical questions raised in this thesis, the stock price reaction is found to be inversely related to the noisiness of the firm's environment as proxied by VARES; the relation, however, is statistically insignificant (t statistic -1.047). This result is consistent with the hypothesized tradeoff between the positive externalities associated with large shareholder monitoring and the negative ones associated with the potential for insider trading. The positive association between INST and excess returns provides, in some measure, an empirical resolution of what is largely an unresolved theoretical issue. The findings are consistent with Pound's (1988) efficient-monitoring hypothesis, and the evidence of Jarrell and Poulsen (1987) and McConnell and Servaes (1990). These results suggest that, on average, the market perceives institutional blockholders to serve as better monitors of managerial performance than individual blockholders.<sup>14</sup>

Overall, the associations between announcement excess returns and all variables except for FCF are in the direction predicted. The regression results suggest that announcement reaction is significantly related to block characteristics as well as some firm characteristics.

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<sup>14</sup> Merton suggests that increasing the firm's investor base reduces the firm's cost of capital, and, to that extent, increases firm value. When large, well-known corporations and institutions purchase large blocks of shares, a concurrent "certification" of the firm's health takes place. Small shareholders, perceiving greater protection from firm failure, gravitate towards these firms, thus increasing the firm's investor base. The findings here appear to be consistent with Merton's (1987) "investor-recognition" or "certification" arguments.

## **Chapter 5**

### ***Blockholder-induced Changes in Firm Characteristics***

Although the analysis of descriptive statistics in the previous chapter reveals relatively weak evidence on the need for monitoring, this study focusses on examining the institution of monitoring by the large shareholder. Thus, other possible motivations for block purchase such as access to the target/acquired firm's technology or "turn-of-the-year" portfolio rebalancing are not considered here. This part of the study, then, attempts to verify the impact of blockholder monitoring on some key performance measures for the firm. The objective is to investigate whether changes in firm performance serve to validate, *ex-post*, the market's initial perception of new block accumulations as "good news" events. In order to establish the effectiveness of monitoring, firm performance must improve as a result of blockholder presence, and systematic changes in firm characteristics that eventually impinge upon firm performance should be observed.

## 5.1 Methodology

### 5.1.1 Analysis of Key Performance Measures and Operating Variables

Following the methodology in Denis and Denis (1992), this study examines changes in operating variables and performance measures, traced from a 3-year pre-block period to a 2-year post-block period. Corresponding changes in control firms are also measured over the same time period. For every firm in the sample and control, the percentage change in each variable is computed as follows:

$$\text{Pre-Block Average (X)} = \frac{[\text{Var}_{-3} + \text{Var}_{-2} + \text{Var}_{-1}]}{3}$$

$$\text{Post-Block Average (Y)} = \frac{[\text{Var}_{+1} + \text{Var}_{+2}]}{2}$$

$$\text{Percentage change} = \frac{Y - X}{X}$$

where *Var* = Relevant variable to be analyzed.

Subscripts indicate the year relative to that of the new block formation.

Percentage changes in the variables analyzed above are reported on a control-firm-adjusted basis. They are calculated as follows:

$$\frac{[Y_s - X_s]}{X_s} - \frac{[Y_c - X_c]}{X_c}$$

where subscripts *s* and *c* denote sample and control firms, respectively. The control-firm-adjusted changes are then averaged across all firms in the sample to get the mean control-firm-adjusted percentage change. To test the significance of this change, the t-statistic is calculated by dividing the mean change by the standard deviation of the change.

Changes in the following **performance measures** are examined pre- vs. post-block to analyze the effects of blockholder monitoring on the firm's performance.

### **1. Accounting Returns**

These are computed by scaling average operating income 3 years prior to and 2 years following the block formation (-3, +2), by total assets over the same period: If monitoring has been effective, then the accounting returns should increase significantly over time and relative to the control firms.

### **2. Average Market-to-Book (MB) Ratio**

The MB ratio is analyzed here as an overall measure of firm performance. It is traced over a period of 3 years prior to and 2 years following the block formation (-3, +2): If monitoring has been effective, then the average MB ratio should increase significantly over time, and relative to the control firms.

The following **operating variables** are studied in order to assess the changes in firm characteristics that affect firm performance.

## **1. Average Undistributed Cash Flow**

Undistributed Cash Flow is a measure of the potential agency costs of free cash flow. This variable is examined as an average of 3 years prior to and 2 years following the new block formation. If monitoring has been effective, then the undistributed cash flow should decrease significantly over time, and relative to the control firms.

## **2. Average Capital Expenditures**

This variable is traced over the period (-3, +2) and reflects changes in the investment policy of the firm. If firms are overinvesting, on average, then a reduction in capital expenditures as a concomitant to the reduction in free cash flow might be value increasing. If firms are not overinvesting, then increasing capital expenditure over time is consistent with a value-maximizing strategy.

In addition to the above tests, a test for the differences in proportions is also carried out for one performance measure (MB ratio) and one operating variable (Free Cash Flow) for the firms in the sample. This is done in order to test for significant differences between the proportions in the pre-block and post-block periods. The hypotheses for the MB ratio and Free Cash Flow in the context of this test are as follows:

### **1. Market-to-Book (MB) Ratio**

Used here as a proxy for firm value, the variable MB in the pre-block period takes the value of 1 when the 3-year average is above the industry median and 0



otherwise. In the post-block period, MB takes the value of 1 when the 2-year average is above the industry median and 0 otherwise. It is hypothesized that the proportion of 1's should increase in the post-block period if blockholder presence has had a value-enhancing effect on the firm.

**2. Free Cash Flow**

As previously defined, this is the mismatch between undistributed cash and the firm's growth opportunities proxied by the firm's market-to-book ratio. When the three-year pre-block average of the firm's undistributed cash flow is greater than the industry median and the average MB ratio in the corresponding period is less than the industry median, FCF takes the value of 1, otherwise FCF takes the value of 0. Likewise, when the 2-year post-block average undistributed cash flow is greater than the industry median and the average post-block MB ratio is less than the industry median, FCF takes a value of 1, otherwise it takes the value of 0. The proportions of 1's in each period indicate the percentage of high free cash flow firms. The hypothesis tested here is that if blockholder monitoring has been effective in reducing the agency costs of free cash flow, then the proportion of firms with high free cash flow should decrease significantly over time.

From Newbold (1984), the test statistic used for testing the significance of the above hypotheses is given by:

$$Z = \frac{\hat{p}_x - \hat{p}_y}{\left[ p_0(1 - p_0) \left( \frac{n_x + n_y}{n_x n_y} \right) \right]^{1/2}}$$

where the unknown common proportion  $p_0$  can be estimated by the pooled estimator,  $\hat{p}_0$ , given by:

$$\hat{p}_0 = \frac{n_x \hat{p}_x + n_y \hat{p}_y}{n_x + n_y}$$

The notation  $n_x$  and  $n_y$ , in the present context represents the number of firms in the sample 3 years preceding and 2 years following the year of the block creation, respectively. The two are equal. Also,  $p_x$  and  $p_y$  represent the proportions of '1's' in the sample pre-block and post-block, respectively.

Thus, for the **MB ratio**, the following hypothesis is tested:

$$H_0: p_x - p_y = 0 \text{ vs. } H_1: p_x - p_y < 0$$

Decision Rule: Reject  $H_0$  if :  $Z < -z_\alpha$

For **Free Cash Flow**, the following hypothesis is tested:

$$H_0: p_x - p_y = 0 \text{ vs. } H_1: p_x - p_y > 0$$

Decision Rule: Reject  $H_0$  if:  $Z > z_\alpha$

### **5.1.2 Post-Block Changes in Blockholder Affiliation with the Target Firm**

To further examine evidence of monitoring by the large shareholder, a tracking of blockholders over two years following the initial block purchase is warranted. One

specific mechanism by which blockholders typically monitor the firm is to acquire a seat on the firm's board of directors. Therefore, in order to investigate whether the external blockholder eventually becomes a director, the specific identity of the blockholder, found in Spectrum 5, is matched against that of the top management of the target firms by examining the annual issue of the Standard and Poor's Directory of Corporations, Directors and Executives two years after the year of the new block creation. For individual blockholders, the procedure simply involves seeking a match between blockholders and officers and directors of the firm. For corporations and institutions, the procedure requires seeking a match between the officers and directors of the blockholding entity and those of the target firms. In the case of a firm with multiple first-time blocks, even a single match between the identity of the blockholder and top management is considered sufficient for evidence of monitoring. While this admittedly is a loose criterion, the application of more stringent criteria results in a drastic reduction in sample size. Clearly, any omission in coverage of the sample firms or the blockholders - in the case of corporate or institutional entities - by the S&P Directory necessitates removal of the firm from the sample.

## **5.2 Discussion of Results**

Table 5 provides details of the mean percentage differences in performance measures between the sample and control firms, traced over a period extending from 3 years prior to to 2 years following the new block formation. Over this period, the sample firms outperform the control firms by nearly 39% in terms of accounting returns. This difference is significant at the 10% level (t-statistic 1.87). In terms of the

MB ratio, commonly used as a proxy for firm value, the sample firms outperform the control firms by nearly 5%. This difference, however, is statistically insignificant.

The sources of improvements in accounting returns are not clearly borne out by the operating variables of the firms. Undistributed cash flow decreases by 0.02% relative to the control but the difference is not statistically significant. Furthermore, capital expenditures also decrease by 6.6%, but this decrease is also statistically insignificant. An examination of the Z-statistic in Table 6 for testing differences in pre- block and post-block proportions for the MB ratio and free cash flow, also does not provide any evidence of a significant directional change. Therefore, while all operating variables and performance measures move in the direction predicted, their statistical insignificance can be viewed as providing virtually no support for the monitoring role of the large shareholder.

An examination of blockholder affiliation with the firm two years following the first block formation provides a stronger framework for the interpretation of the above results. Of the 92 firms in the sample, 22 firms are removed because either the target firm or the blockholder are not covered in the S&P Directory. Of the remaining 70 firms in the truncated sample, in only 14 cases does the blockholder become a director of the firm. Out of these 14 cases, 12 are individual blockholders and 2 are corporate entities. Interestingly, in the surviving sample, there is no evidence of any institutional representation on the firm's board of directors. These findings suggest that institutional blockholdings are largely passive in the context of "hands on" corporate governance, while corporate blockholdings perhaps engender value gains through a takeover. Thus, when the evidence of valuation gains is juxtaposed along

with results of the time-series analysis, monitoring appears to be a partial, even insignificant, explanation for the gains observed upon block formation.

## **Chapter 6**

### ***Summary and Conclusions***

This dissertation is an empirical examination of the association between ownership structure and corporate value from the perspective of the large external shareholder. While theoretical literature [Shleifer and Vishny (1986)] has postulated a monitoring role for the blockholder, no empirical study as yet has systematically attempted to explore the extent of this role in the context of corporate governance. Empirical evidence concerning the relation between large shareholdings and firm value has been somewhat inconclusive, stemming at least in part from the ambiguous and imprecise classification and measurement of external blockholdings in previous studies. This thesis, through its specific choices of data sources and methodology, has attempted to re-examine the question and thereby verify the role of large shareholder oversight as an incentive-alignment mechanism between managers and shareholders. An additional motivation for this study has been to analyze the sources of gains, both to the firm and the blockholder, that entail new block creations. Accordingly, this thesis addresses four issues: (1) the existence of cross-sectional variation in the incidence of large shareholdings; (2) the valuation

consequences of large block creations; (3) the the cross-sectional relationships between the market response and characteristics of the firm and of the blockholder; and finally, (4) the time series (control-adjusted) changes in firm performance measures and operating variables attributable to the presence of the blockholder.

The first issue attempts to explain the cross-sectional variation in the incidence of large block shareholdings. In doing so, it is first recognized that large blockholdings impose significant costs of foregone opportunities for portfolio diversification on the blockholder, in the presence of risk aversion and wealth constraints. The incurrence of such costs is rational only when the benefits of blockholdings exceed the costs. In the context of agency theory, it is argued that the potential sources of gains to the blockholder result from a mitigation of the agency costs of free cash flow as well as the other non-free-cash-flow-related equity agency costs, the potential for wealth transfers from bondholders, the expectation of synergy gains in the case of corporate blockholdings, the potential for insider trading, and the expectation of greenmail. Mitigation of equity agency costs is a direct function of the effort and efficacy of monitoring by the blockholder. Wealth expropriation from bondholders is argued to result from either explicit motivations of an exploitative nature, or from simply influencing risk-averse managers to increase asset-risk to the levels contracted for by bondholders. The potential for insider trading is a direct function of firm-specific risk, following Demsetz (1986) and represents a source of secondary *quid pro quo* for monitoring. While equity-agency-cost-reducing, or wealth transfer incentives are value-increasing, the potential for insider trading and greenmail transactions are likely to be value-reducing.

The next issue concerns the valuation consequences of large block accumulations. Based on the foregoing arguments, it is hypothesized that the net valuation impact of some value-increasing and some value-reducing gains to the blockholder is positive. Therefore, the first hypothesis tested is that the stock price reaction to news of new block creations is positive. Using Spectrum 5 as the primary data source, a set of rigorous criteria is devised in order to study characteristics of firms that attract large shareholdings for the first time. Thus, using a final sample of 92 firms, an event study using weekly data is carried out to examine the market reaction to new block creations. The results indicate a positive and significant stock price reaction of nearly 2% during the announcement week - a finding consistent with the proposed hypothesis and documented in several other studies.

The third issue involves relating the sources of the gains identified earlier to the announcement reaction. The hypotheses tested are that announcement reaction is positively related to the pre-announcement level of free cash flow, measured as the mismatch between undistributed cash [Lehn and Poulsen (1989)] and the firm's investment opportunities as proxied by its market-to-book ratio, as well as to the potential for wealth transfer bondholders, proxied by the firm's level of discretionary assets [Prowse (1990)]. In addition to firm characteristics, block characteristics such as block size [Shleifer and Vishny (1986), Hirshleifer and Titman (1990), Jegadeesh and Chowdhry (1988)] and blockholder identity -that is, whether the blockholder is a corporation - are also hypothesized to have valuation implications for the firm. Corporations are hypothesized to impact excess returns positively due to the potential synergy gains associated with interfirm investments, following Mikkelson and Ruback (1985). The relation between firm-specific risk and announcement excess returns is argued to depend on the trade-off between the gains from



monitoring accruing to the firm, and the cost of insider trading borne by the outside shareholder. This is an empirical question. Additionally, there appears to be no theoretical basis to hypothesize that institutions should have a greater value-enhancing effect than individuals. Thus the relation between institutions and announcement reaction is also left as an empirical question. A cross-sectional regression of week-0 abnormal returns upon firm-specific and block-specific variables suggests, first, that the market reaction is significantly related to the potential for wealth transfers from bondholders. Interestingly, potential reduction in the agency costs of free cash flow through blockholder monitoring appears to have no impact upon the stock price reaction. Firm-specific risk, proxied by the residual variance of the market model, has a negative but insignificant effect upon the market reaction. A significant finding is that all block characteristics are positively related to the announcement reaction. These results suggest that the market perceives corporate and institutional blockholders to have better skills and motivations in deterring self-interested managerial behavior than individual blockholders.

In the final part of the study, a pre- and post-block comparison of key performance measures and operating variables between the sample and control sets of firms is carried out over a period extending from three years preceding the block creation to two years following the same, in order to analyze the effects of large shareholder oversight of the firm's management. Evidence of effective monitoring should be manifest in improvements in firm performance as well as in systemic changes in firm characteristics that affect performance. Of the two performance measures, accounting returns and market-to-book ratio, the first measure for the sample firms exhibits a significant time-series improvement relative to the control sample. Operating variables such as free cash flow and capital expenditures, also

exhibit no time-series differences relative to the control firms. A time-series tracking of blockholder affiliation with the target firms, two years after the block purchase, reveals that in only a small fraction of sample firms does the blockholder acquire a seat on the board of directors - a virtual necessity for effective monitoring. There is no evidence of institutional presence on the target firm's board of directors - a finding that reaffirms the traditional perception of "passivity" associated with institutions. This evidence, therefore, provides anemic support for the monitoring role of the blockholder.

Finally, the results of this study do not provide clear support for theoretical models that envisage blockholder monitoring as a long-term corrective mechanism for restoring managerial behavior to conform to shareholder-wealth maximizing objectives. However, it reveals that while large block shareholdings, on average, elicit positive stock price reactions, changes in firm performance cannot definitively be attributed to large block shareholder presence, unless the blockholder's involvement in the corporate governance process is demonstrably active. Some extensions for future research include an independent analysis for each type of blockholder. This can be accomplished by extending the study over a wider window of time. For institutions, an analysis based on a stratification along the lines of susceptibility to management pressure may uncover additional insights. Then, for both corporations and institutions, a test of Merton's (1987) "investor-recognition" hypothesis may serve to incrementally explain the positive valuation impact of new block formations.

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**Table 1**  
**Description of New Block Creations (1984-86).**

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Number of Firms with New Blocks :	1984	39
	1985	40
	1986	13
<i>Total</i>		92
Number of firms with Institutional Blocks :	1984	27
	1985	31
	1986	4
<i>Total</i>		62
Number of firms with Corporate Blocks :	1984	7
	1985	4
	1986	4
<i>Total</i>		15
Number of firms with Individual Blocks :	1984	6
	1985	4
	1986	5
<i>Total</i>		15
Number of Sample Firms trading on NYSE/AMEX		33
Number of Sample Firms Trading on NASDAQ		59
<i>Total</i>		92

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**Table 2**

**Excess Returns around the Announcements of New Block Purchases**  
**Weekly Average Excess Returns using the Market Model with Value-Weighted**  
**Index Returns Around the Announcements of New Blocks for a Sample of 92**  
**Firms.**

---

<i>Week</i>	<i>AER(%)<sup>a</sup></i>	<i>t(AER)<sup>b</sup></i>	<i>PRNEG<sup>c</sup></i>	<i>Z(PRNEG)<sup>d</sup></i>
-5	-0.83	-1.15	0.54	0.81
-4	-0.02	-0.02	0.54	0.81
-3	0.07	0.10	0.47	-0.61
-2	0.58	0.81	0.59	1.81*
-1	0.80	1.11	0.55	1.01
0	1.94	2.69***	0.41	-1.81*
1	0.45	0.63	0.48	-0.40
2	0.06	0.08	0.53	0.61
3	0.34	0.48	0.48	-0.40
4	-0.65	-0.91	0.59	1.81*
5	-0.19	-0.27	0.57	1.41

---

\*\*\* Significant at the 1% level.

\* Significant at the 10% level.

<sup>a</sup>AER is the average excess return for the week.

<sup>b</sup>t(AER) is the t-statistic for testing the significance of the average excess return.

<sup>c</sup>PRNEG is the proportion of negative excess returns for the week.

<sup>d</sup>Z(PRNEG) is the Z-statistic for testing the significance of the proportion of negative excess returns, using the average proportion of negative excess returns over the control period as the expected value.

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**Table 3****Descriptive Statistics on Characteristics of Sample and Control Firms Over the Period 1984-86**

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<b>Characteristic<sup>a</sup></b>	<b>Sample</b>	<b>Control</b>
Firm Size (Total Assets) mill	\$54.41 mill.	\$73.10
Market-to-Book (MB) Ratio	1.13	1.00
Accounting Returns	12.8%	13.3%
Undistributed Cash Flow (UCF) (As % of Total Assets)	5.8%	5.6%
Discretionary Assets (As % of Total Assets)	55.5%	54.3%
<b>Blockholding Size<sup>b</sup></b>	<b>Mean</b>	<b>Median</b>
Corporations	20.0%	16.0%
Institutions	11.0%	8.0%
Individuals	14.0%	12.0%

---

<sup>a</sup>For both sample and control firms, each firm characteristic is measured as a 3-year average prior to the year of the blockholding. Reported figures are sample medians. Data on the above variables is obtained from COMPUSTAT II.

<sup>b</sup>Data on Blockholdings is obtained from Spectrum 5.

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**Table 4**

**OLS Regression of Week-0 Abnormal Returns on Firm-specific and Blockholder-specific variables for a Sample of 92 firms (t-statistics in parentheses)**

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**Model Specification**

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<i>Variable</i>	<i>Coefficient</i>
Intercept	-0.112 (-3.626)***
FCF	-0.007 (-0.308)
AD	0.087 (2.350)**
SIZE	0.400 (5.622)***
CORP	0.060 (2.090)**
INST	0.054 (2.414)**
VARES	-1.887 (-1.047)
R-square	0.42
Adj. R-square	0.37

---

\*\*\* Significant at the 1% level.

\*\* Significant at the 5% level.

\* Significant at the 10% level.

**Table 5**  
**Blockholder-Induced Changes in**  
**Performance Measures and Operating Variables**

**Panel A: Performance Measures (N = 57)**

Mean Percentage Differences in Pre- Vs. Post-Block Performance Measures between Sample and Control firms (t-statistics in parentheses)

<i>Measure</i>	<i>Mean Difference</i>
Accounting Returns (-3, + 2)	38.95 % (1.87)*
Market-to-Book Ratio (-3, + 2)	4.89% (0.78)

**Panel B: Operating Variables (N = 57)**

<i>Variable</i>	<i>Mean Difference</i>
Undistributed Cash Flow (-3, + 2)	-0.02% (-0.695)
Capital Expenditures (-3, + 2)	-6.6% (-0.895)

- \*\*\* Significant at the 1% level.  
 \*\* Significant at the 5% level.  
 \* Significant at the 10% level.

---

**Table 6**

**Z-Statistics to Test for Equality of Proportions for Sample Firms, Pre vs. Post Block  
(Significance levels in parentheses)**

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<i>Variable</i>	<i>Z-Statistic</i>
Market-to-Book (MB) Ratio (-3, + 2)	-0.304 (-0.35)
Free Cash Flow (-3, + 2)	0.696 (0.25)

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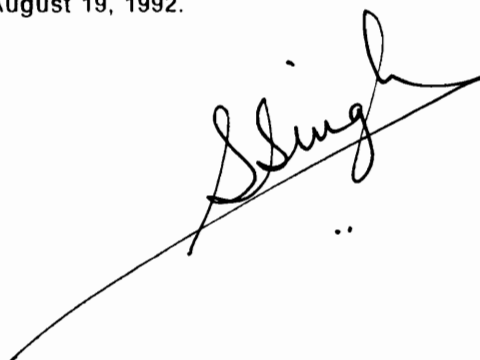
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## Vita

Sudhir Singh was born to Kamal and Sushil Bahadur Singh on the 15th of January, 1961, in Basti, U.P., India. He had the initial part of his school education in Cuttack, Orissa where he attended Stewart School, and the remainder in St. Joseph's High School, Allahabad, U.P. After obtaining his school leaving certificate from Stewart Science College, Cuttack in 1979, he enrolled in the Master of Management Studies (MMS) Program at the Birla Institute of Technology and Science, Pilani, Rajasthan, India. In early 1984, Sudhir Singh joined Wipro Information Technology Limited, a leading manufacturer of minicomputers in India, as Marketing Executive. He arrived in the United States of America in January 1986, and enrolled in the Master of Business Administration (MBA) Program at the College of William and Mary, Williamsburg, Virginia. After completing one semester at William and Mary, he transferred to the Georgia Institute of Technology, Atlanta, Georgia, and enrolled in the Master of Science in Management (MSM) Program. Upon graduation from Georgia Tech in June 1988, Sudhir Singh entered the doctoral program in Finance at Virginia Tech in Fall the same year. He married Sujata Srivastava in July 1990. His doctorate was completed on August 10, 1992 and he will join the Department of Business Administration at Frostburg State University, Frostburg, Maryland as Assistant Professor on August 19, 1992.

A handwritten signature in black ink, appearing to read 'S Singh', is written over a long, thin horizontal line that extends from the left margin towards the center of the page.