

**Control Orientation And Firm Performance:
Test Of An Agency Theory Interpretation
Of Strategic Human Resource Management**

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Working Paper #96-05

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of research, conferences, and projects available to others interested in human resource management in preliminary form to encourage discussion and suggestions.

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ABSTRACT

Agency theory is used to develop an approach toward organizational control that elaborates upon the construct underlying strategic human resource management. Additionally, firm risk is examined as a moderator to determine how control orientation affects firm performance. A sample of initial public offering firms is studied, and both short and long-term stock price, in addition to firm survival, are predicted. Results support agency and SHRM notions that incentive alignment increases stock price in high risk firms; however, it negatively affects firm survival. Several explanations for the polarizing effect of risk are discussed.

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CONTROL ORIENTATION AND FIRM PERFORMANCE:
TEST OF AN AGENCY THEORY INTERPRETATION OF
STRATEGIC HUMAN RESOURCE MANAGEMENT

Human resource management (HRM) has entered an era where it is attempting to become a “strategic partner” within the organization, helping businesses to transform and become more competitive (Dyer and Kochan, 1994). As a result, a number of research studies have emerged that focus on the way in which human resource management activity supports business strategy. The assumption guiding this research is that the work done by the HRM group (e.g. compensation, selection, training, etc.) can be conducted in a variety of ways, and each pattern or “bundle” of human resource tasks sends a message about the behavioral expectations of the company (Huselid, 1995; MacDuffie, 1995). It is hoped that these expectations translate into goals that are accepted and pursued by employees, and that are consistent with the business strategy. Strategic human resource management (SHRM) seeks to achieve congruence between employees’ work-related goals (communicated via various HRM policies and practices) and objectives espoused by the firm’s strategy.

This more macro approach toward HRM has led to the study of the strategic use of human resource tactics, such as compensation (Gomez-Mejia and Balkin, 1992) and selection (Olian and Rynes, 1984) in addition to matching overall patterns of human resource practices to business strategy (Jackson, Schuler, and Rivero, 1989; Huselid, 1995). The focus of the research conducted to date has been on the way in which HRM policies and practices are designed and administered, and the dominant research method has involved obtaining survey data from HRM managers and linking reported human resource management practices to business strategy and

firm performance. The assumption seems to be that human resource management activities are essential to understanding firm performance and what has been called human resource strategy.

Although significantly advancing the field of HRM toward a more macro orientation, this research has been somewhat limited in its development of an underlying construct. We are still not sure what strategic human resource management really represents, which leads to a number of serious problems in the areas of theory development and measurement (Dyer and Kochan, 1994).

Snell (1992) made some progress in conceptualizing the construct by recognizing the need for its further refinement and then suggesting control theory as a way to “integrate human resource practices and place them in the strategic context of firms” (293). His study, however, only focused on formal human resource practices, therefore, limiting the types of control mechanisms that were studied. According to Snell (1992: 294), “informal modes of personal influence were not considered, precluding examination of small firms, in which control is primarily an informal process.” Given that a number of studies have been conducted that do not include informal means of managing human resources, the research described in this paper contributes to the SHRM literature by including informal control, and it is hoped that by expanding upon earlier work, the results can contribute to a fuller conceptualization of SHRM.

The purpose of this research is to examine the underlying construct of SHRM in terms of control orientation toward all employees. The study described in this paper extends Snell’s (1992) work and that of other researchers in a number of important ways. First, application of agency theory leads to a broader conceptualization of strategic control in which the human resource function represents but one control mechanism that can be manifested in organizations. Two dimensions of organizational control for all employees, derived from agency theory, are

proposed that incorporate alternative control mechanisms including unions, incentive stock options, and profit sharing. Second, a sample of initial public offering (IPO) firms (many of which do not have human resource management departments) is studied. This domain of younger, smaller firms has been virtually ignored by SHRM researchers in the past. Finally, competing sets of hypotheses are developed and tested to investigate the link between control orientation and firm performance. Snell and Youndt (1995: 712) recently stated that “organizational performance is the *raison d’etre* for HRM control - its mismanagement can lead to confusion, inefficiency, and the like, but the absence of HRM control ultimately leads to organizational demise.” Despite the assumption that organizational demise should be related to HRM, firm survival has not been examined by researchers in SHRM. This study will seek to remedy that shortcoming by investigating the effects of control orientation on organizational outcome measures including firm survival, and short and long-term stock price. In order to accomplish this goal, the conditions under which various forms of control might be effective are examined, and both the agency theory and the strategic human resource management literatures are used to explicate the moderating role of firm level risk.

AGENCY THEORY AND CONTROL ORIENTATION

Agency theory has been used to understand situations in which an individual delegates responsibility for a task to other persons (Fama, 1980). Agency theory has been classically applied to study the relationship between owners of organizations and the managers who run those firms (Fama and Jensen, 1983). In practice, it has been most often employed in research on the mechanisms used by owners to align CEOs’ interests with those of the organizations (Gomez-Mejia, 1994). In addition to work on the relationship between owners and top management,

agency theory has also been applied to study the employment relationships for other types of workers, such as faculty (Gomez-Mejia and Balkin, 1992), sales representatives (Eisenhardt, 1985), and production workers (Welbourne, Balkin, and Gomez-Mejia, 1995).

In all cases, agency theory was used to explicate alternative ways of controlling behavior of individuals who have been delegated work by someone. The person delegating the work is called the principal, and the individual to whom tasks are assigned is referred to as the agent. Since most agency theory research has involved top management, much of the work has dealt with the study of incentive systems used to align the interests of executives (agents) with those of the shareholders (principals). Executives have been the focal point of study because their behavior is difficult to monitor through more traditional mechanisms (i.e. direct supervision, close monitoring of behaviors). Agency theory assumes that the best way of aligning employees' interests with those of the principal is through formal monitoring, and only when the cost of monitoring is high should a company consider alternatives to formal monitoring. In the case of executives, formal monitoring is assumed to be impossible, therefore the study of executive compensation, as a form of monitoring, has been pursued by a number of researchers from a variety of academic fields (e.g. organization behavior, accounting, finance, human resource management) (for a review, see Gomez-Mejia, 1994).

Although agency theory has been most frequently applied to explain the relationship between owners and executives, it can also be used to understand organizational control for the overall employee population. According to Becker and Olson (1989: 247): "Two management strategies are possible. First, managers can attempt to allocate some of the firm's business risk to labor, with the aim of increasing workers' incentive to act as owners. The current support for

profit sharing and employee stock ownership plans by firms is due, in part, to a belief that these plans will reduce agency costs by aligning the interests of the workers with the current and future profitability of the firm. A second strategy is to closely supervise and control employees, allocating the greater share of the firm's business risk (and associated returns) to the shareholders." These two forms of control implied by agency theory parallel the types of control strategies that are suggested by organizational theorists (Thompson, 1967; Ouchi, 1979, 1980). Organizational theorists argue that control mechanisms can be described as focusing on behaviors versus outcomes, where behavioral control results when compliance with policies is required as the dominant method of operating, and outcome control ensues through the use of incentives to ensure alignment with organizational goals. Recently, Eisenhardt (1985, 1989) combined the agency theory and organizational theory approaches to organizational control and noted that two underlying control strategies (one emphasizing behavioral monitoring and the other focusing on incentive alignment) emerge from both theoretical perspectives.

In conclusion, one method of control implied by agency theory is direct monitoring of agents, which involves establishment of rules and procedures and the hiring of individuals to assure *policy compliance*. The second form of control is *incentive alignment*. Principals (or owners) use incentive alignment when they design compensation contracts or other mechanisms to entice employees to behave in ways that will maximize the interests of both the CEO and the owners. Thus, the underlying construct being suggested here is control orientation toward all employees, and the human resource department (and its associated activities) can be viewed as but one of a number of alternative ways to operationalize control within a business.

An agency theory interpretation suggests that human resource departments can be viewed as serving a policy compliance function for the organization, where performance appraisal, job analysis, job evaluation, human resource audits, job postings, etc. make up the “rules or policies” for managing and controlling employees. However, HR departments are not the only source of providing this type of control function within a company. Unions also work to control employees through compliance; however, they establish a different set of rules and procedures (union stewards, grievance procedures, contracts, etc.). Both structures (unions and HR departments) exist to create systems that formally establish organizational-based forms of employee control; they are both functions that serve to maintain organizational control through policy compliance (Osterman, 1984).

Alternatively, as noted by Becker and Olson (1989), stock option programs and profit sharing are mechanisms for increasing alignment among all employees within an organization. These programs provide individual employees with incentives to work toward the organization’s goals in the same way that CEO bonus plans provide incentives for executives to make decisions that will support the interests of the stockholders or owners. Thus, stock option programs and profit sharing help to create an environment in which employees are, in a sense, part owners of the business. In this role, employees are then expected to exert higher levels of self and peer control to ensure that their fellow employees are doing what is necessary to contribute to the corporation’s success and long-term survival.

CONTROL ORIENTATION AND FIRM PERFORMANCE

How does organizational control affect both short and long-term firm performance?
Although both the strategic human resource management and agency theory literatures have

addressed this issue, the conclusions reached by each can be interpreted as contradictory.

Therefore, in order to develop hypotheses on the relationship between control orientation and firm performance, both literatures will be utilized, and competing hypotheses will be developed.

Agency theory suggests that the performance and ultimate survival of an organization are directly related to its agency costs; lower agency costs lead to greater organizational efficiency and to increased likelihood of survival. Agency costs include the costs of monitoring, bonding, and residual loss (Barney and Ouchi, 1986). Monitoring costs are defined as the costs incurred from directly controlling the actions of employees (e.g. creating administrative functions such as an HR department, hiring supervisors, etc.). Bonding costs arise and are borne by agents when agents are required to pursue activities to establish their credentials and provide behavioral “guarantees” to their employers (e.g. obtaining a CPA or being bonded). Residual loss is defined as the inevitable cost to the employer that results because complete (100%) compliance by employees cannot be achieved.

Companies seek to minimize total agency costs and thereby maximize performance by optimizing the relationship between expenditures incurred by engaging in monitoring activities and gains achieved through decreases in residual loss. When costs of conducting monitoring activities exceed decreases in residual loss, monitoring becomes excessive (Stiglitz, 1989). Although the absence of monitoring enables employees to shirk or to extract organizational resources in the form of perquisites, excessive monitoring may also be detrimental to the firm. Excessive monitoring may restrict employees’ abilities to act which, in turn, will lead to increased residual loss and reduced firm performance. Recently, Welbourne and Gomez-Mejia (1995) suggested that there is an additional agency cost, termed the behavioral cost of monitoring, that is

incurred when companies over-monitor. It can result in employees' becoming risk averse, failing to take initiative, and performing at suboptimal levels because overbearing control mechanisms inhibit employees' abilities to respond creatively as problems arise. Thus, the escalation in total agency costs resulting from expenses associated with intense monitoring is further exacerbated by increased residual loss resulting from employees' reluctance to behave in accordance with organizational goals.

This seems to point to the presence of a curvilinear relationship between monitoring and total agency costs. In fact, recent research on executive compensation found evidence that, at some point, monitoring has diminishing returns (Gomez-Mejia and Tosi, 1994). On the other hand, negligible monitoring may have ill effects; Rao and Neilsen (1992) proposed that the structure of monitoring and incentive systems determined agency costs, and found that mutual savings and loan associations, with their weaker monitoring and incentives were less likely to survive than stock savings and loan associations which were characterized by stronger monitoring and incentives.

Application of these agency theory findings to the context of control orientation suggests that organizations seek to reduce residual loss via the implementation of control mechanisms for their employees. As such, the selection of control orientation is pivotal in determining total organizational agency costs and, therefore, future firm performance. As a result, organizations will incur differential levels of agency costs depending on the control orientations that they implement for all employees. Either excessive or negligible monitoring will drive up total agency costs resulting in deleterious effects on firm performance. Thus, firms that control employees by

both policy compliance and incentive alignment may suffer from excessive monitoring, while firms that use neither may be prone to particularly high residual losses.

Hypothesis 1a: Monitoring by both policy compliance and incentive alignment will negatively affect firm performance.

Hypothesis 1b: Lack of monitoring (having neither policy compliance nor incentive alignment) will negatively affect firm performance.

Although agency theory specifies that negligible or excessive monitoring can be detrimental for firm performance, the specific conditions under which different forms of control are appropriate have not been adequately addressed by prior research. In addition, agency theory provides somewhat mixed recommendations regarding the form of control that should be most appropriate for organizations. The theory has been developed primarily for application to the executive and management compensation literature, and the control orientations proposed in this study focus on controlling all employees, rather than only top executives. Unfortunately, there is even less agency theory related research focusing on the entire employee population. While risk preferences of principals and agents are central to agency theory propositions, the presence of firm risk may have implications for the efficacy of control orientations.

Agency theory suggests that optimal choices among control strategies might be affected by the degree of risk faced by the firm (Wiseman & Gomez-Mejia, 1995). Overall firm risk plays a role in determining the appropriate distribution of risk among organizational participants (i.e. principals and agents). Eisenhardt (1989) implies that differential willingness to accept risk among principals and agents should provide the basis for evaluating the effectiveness of a particular control orientation. Two countervailing schools of thought within the agency literature

suggest that we can view willingness to accept risk from the standpoint of the organization (principal) or from the standpoint of employees (agents). From these perspectives emerge two competing sets of hypotheses regarding the effects of control orientation on firm performance, one of which is consistent with the SHRM literature.

Viewing risk from a company perspective suggests that as firm risk increases, organizations will benefit from choosing incentive alignment rather than policy compliance because incentives allow risk to be shared among all employees. The underlying premise is that increasing employee stakes in the firm by providing ownership will make employees more likely to behave in the interests of the organization (Jensen and Meckling, 1976). This, in turn, reduces agency costs and enhances firm performance. Pay-for-performance advocates most strongly adhere to this premise; they de-emphasize the importance of risk aversion of employees in favor of curbing agency costs associated with agent effort aversion (e.g. Jensen and Murphy, 1990). The argument is that greater incentive alignment provides rewards for employees to engage appropriately in risk-taking behaviors that will enhance long-run firm performance. The findings of Gerhart and Milkovich (1990: 685) support this argument; they suggest that “making many employees eligible for long-term incentives is associated with high organizational performance in the long run.” Therefore, it appears that as firm risk increases, agency costs will be reduced and firm performance enhanced by transferring risk to employees through incentives.

This conclusion is supported by work in the area of strategic human resource management. For example, Miles and Snow (1984) suggest that prospector firms, which are characterized as higher risk organizations (i.e. changing products and markets, fast growth, etc.) should be more effective when the total compensation package places a heavy emphasis on

incentives. Schuler (1987), proposes that entrepreneurial firms, which are described as facing high levels of risk, should use long-term incentive programs. He specifically notes that by using this type of incentive system, the company should “stimulate and reinforce risk taking, and willingness to assume responsibility for a longer-term orientation” (Schuler, 1987: 10). Gomez-Mejia and Balkin (1992) also note that compensation systems including incentives that share firm risk with employees are more effective for fast growth, start-up, risk taking organizations.

The agency theory and strategic human resource management literatures seem to imply that higher risk firms will obtain improved performance by sharing risk with employees through the implementation of incentive systems. Thus, relying on incentive alignment should be most appropriate for firms facing high risk. Conversely, this suggests that strict reliance on policy compliance will not be favorable for high risk firms. If the assumption holds that high risk firms require employees to be willing to take risks to achieve enhanced firm performance, control via policy compliance will be less than optimal because it provides little incentive for employees to behave accordingly.

Hypothesis 2a: The use of incentive alignment will positively affect firm performance as firm risk increases.

Hypothesis 2b: The use of policy compliance will negatively affect firm performance as firm risk increases.

Viewing risk from the perspective of employees, however, leads to contradictory propositions regarding control orientation and firm performance. While many agency theorists (e.g. Jensen and Meckling, 1976) have chosen to argue from the perspective of the organization, others (e.g. Shavell, 1979) have focused on the importance of the potential disadvantages of

excessive risk bearing on the part of the agent. In this vein, agency theory suggests that higher risk firms will actually suffer by transferring risk to employees. Risk transfer may be harmful for reasons directly related to differences in principals' and agents' abilities to diversify their risk portfolios. Owners can diversify their risk by holding stock in more than one company, but employees, who are relatively risk-averse and have their employment and income opportunities linked primarily to one firm, cannot as easily diversify their risk portfolios (Shavell, 1979; Jensen and Murphy, 1990). As Eisenhardt (1985:137) points out, employees "bear increasing risk as control becomes more outcome based." Yet, given their relative inability to diversify their overall levels of risk, they may be unwilling to accept the additional risk associated with incentive alignment. In much the same way that excessive monitoring may lead to risk averse behavior among employees, imposing too much risk upon employees in the form of contingent pay may lead to their becoming paralyzed by the unusually high levels of risk. Again, this paralysis would be characterized by a shift toward risk averse behavior in which employees may make decisions that offer the lowest levels of risk for themselves yet are contrary to the best interests of the organization. This type of behavior leads to increased agency costs, which, in turn, lead to decreased organizational performance.

Two recent studies (Beatty and Zajac, 1994; Bloom and Milkovich, 1995) investigated the likelihood of firms' using incentives in relation to the degree of firm risk. Both led to similar conclusions that higher levels of firm risk were associated with lower incidence of incentive implementation (either in the form of stock options or short-term variable pay) for top managers. Additionally, the findings of Beatty and Zajac (1994) suggest that there are trade-offs between monitoring and incentives and further support the proposition of Rao and Neilsen (1992) that the

structure of monitoring and incentives determines agency costs. Beatty and Zajac (1994) found that degree of monitoring by boards was inversely related to the levels of incentives used within a sample of IPO firms. Thus, in riskier firms, where managers are less likely to be monitored by incentives, alternative monitoring mechanisms (i.e. board structure) are put into place. The implication is that firm risk influences top managers' willingness to accept contingent compensation. Unwillingness to accept contingent compensation in the face of high firm risk will likely be even more pronounced within the general employee population because of employees' lower abilities to diversify their employment portfolios. Therefore, in high risk situations, policy compliance, as opposed to incentive alignment, would be the preferred form of control.

Not only do managers in high risk companies prefer lower levels of incentive pay, evidence also exists to suggest that incentives have a negative effect on firm performance in the presence of risk. Bloom and Milkovich (1995) found that higher risk organizations that make greater use of short-term variable pay exhibit poorer financial performance than high risk firms that use less incentive pay. Their findings suggest that high risk firms that rely on incentive alignment will perform less well than high risk firms that do not use incentive alignment. A third study, conducted by Snell and Youndt (1995), although not directly testing the risk hypothesis, supports this conclusion. In fact, they state that their results are "consistent with recent arguments of agency theorists who advise against the use of results based incentives and controls. Since an output orientation toward HRM...forces managers to bear more risk, it may lead to myopic thinking and excessively conservative courses of action" (Snell and Youndt, 1995: 729-730). In effect, relying on incentives, or output based forms of control, may have adverse effects on firm performance in the presence of high risk.

Synthesis of the agency theory propositions regarding ability to diversify risk, the recent research that examines the effects of firm risk on the structure of monitoring and incentives, and current findings regarding the effects of incentives on firm performance leads to the conclusion that the ill-effects of increased risk bearing of the agent may outweigh the costs of monitoring. Thus, viewing risk from the standpoint of employees points to policy compliance over incentive alignment as the preferred form of control.

Hypothesis 3a: Policy compliance will positively affect firm performance as firm risk increases.

Hypothesis 3b: Incentive alignment will negatively affect firm performance as firm risk increases.

The hypotheses are tested in a sample of firms with varying control orientations; some firms use both policy compliance and incentive alignment, while others use only one form of control, and the remainder of firms use neither (or informal mechanisms) to manage all of their employees. The effect of the presence and absence of both forms of control on both short and long-term performance, including firm survival, will be reported.

RESEARCH METHOD

Sample

The sample consists of firms that initiated initial public offerings in 1988. This sample was chosen because the initial public offering (IPO) firm sample includes small and mid-size firms, which have not received much attention in the past. Such a sample is particularly appropriate for this study for a number of reasons. First, it permits investigation of the effects of control orientation within firms with and without traditional HRM; non-traditional forms of control have

been excluded from studies in the past because of SHRM researchers' relying on samples of companies with formal HRM departments. Thus, inclusion of informal and non-traditional approaches to control in this research should contribute to broadening our understanding of the fuller domain of control options available to organizations and its implications for future performance. Second, the IPO sample provides a context that Eisenhardt (1989:71) suggests will be particularly fruitful for the advancement of agency theory. She advocates applying agency theory to situations in which outcome uncertainty is sufficiently high so as to "trigger the risk implications of the theory." IPO firms face a higher degree of outcome uncertainty in terms of likelihood of survival (Zeune, 1993), and they bear a wider range of risks than do larger, more established companies (Beatty and Zajac, 1994). Finally, selection of this IPO sample enables us to examine multiple measures of organizational performance. Gerhart and Milkovich (1990) encouraged researchers to expand their definitions of organizational performance to include measures, such as survival and shareholder wealth, that have been relatively unexplored in the past. In response, we will investigate the effects of control orientation on the ultimate measure of performance, survival, in addition to short and long term stock price.

The sample contains 108 non-financial companies that initiated their IPOs in 1988 and that completed the process in either 1988 or 1989. Approximately 250 firms filed securities registrations with the SEC in 1988, and we pared down the list to 170 by deleting those listed as closed-ends funds, real estate investment trusts, and other firms not producing a good or service. After receiving the prospectuses for the remaining 170 companies, we eliminated additional firms that also fell into the "not producing a good or service" category.

Data Collection and Coding

Data were gathered from the prospectus of each firm. The prospectus is the document provided to the Securities and Exchange Commission (SEC) prior to the public offering, and it is also the document circulated by the underwriter to assess demand for the firm's stock. The SEC requires firms to follow strict guidelines in the format. The document itself is usually written by members of the management team and then scrutinized by lawyers and accountants.

While the potential for positive bias exists in the prospectus, the firm is liable for any information that might mislead investors (O'Flaherty, 1984). The Securities Act of 1933 sets the requirements for the prospectus, thus assuring consistency in the type of information that is included in the document. The SEC also requires that the prospectus be accurate to the best knowledge of management. Given this requirement and the fact that the SEC requires a tremendous amount of detail regarding company operations, the prospectus is a useful data source (Marino, Castaldi, and Dollinger, 1989).

Prospectuses from 1988 are not readily available in public sources, therefore, copies were obtained from Disclosure, which is a data clearing house for the Securities and Exchange Commission. We were able to acquire the prospectuses for all non-financial companies that initiated an initial public offering during 1988. Data were coded using a two-step process with two coders who were unaware of the survival status of the companies as they coded.

First, a five-page summary of each prospectus was constructed. Given the fact that the prospectus is not a traditional data source, this first step allowed for careful reading of each document, cross checking at the second stage of coding, and notation of any unusual firm characteristics. The second step involved numerically coding each five-page summary for specific

information. Researchers cross-coded a sample of companies (two people coded the same prospectus), and they switched companies for the second stage of coding. Any questions about codes were resolved through group consensus, which involved meetings with the coders and an additional researcher. Data on the company, strategy, financial status, and members of the top management team were included in the coding process. A total of 250 different items were ultimately coded, allowing for a thorough analysis of differences among companies exhibiting the four control orientations. In addition to the data collected from the prospectuses, financial data were gathered from COMPUSTAT.

Overall Sample Characteristics

At the time of its IPO, the average firm in the sample was 11.74 years old (standard deviation of 17.25) and employed 828 (s.d. 2,288) people. The typical firm, however, was much younger and smaller. Half of the firms were fewer than 6 years old and had fewer than 130 employees; in fact, only about 25% of the firms in the sample had more than 550 workers. Most of the businesses were located throughout the United States (5 were located in foreign countries), with most (24.1%) located in the Pacific states and the second and third largest concentrations being in the South Atlantic (17.6%) and Mid-Atlantic (16.7%), respectively. The sample encompasses several types of businesses, ranging from food service retailing to biotechnology to steel minimills. Using the classification scheme suggested by the Small Business Administration, the sample has 37 companies in service industries, 1 firm in agriculture, 8 in retail trade, 5 in wholesale trade, 9 in transportation, and 48 in manufacturing. The average net profit at the time of the IPO for the sample was \$4,112,700 (s.d. \$12,150,200) with 36% of the firms reporting losses at the time of their IPO's.

Control Orientation

Four categories of control orientation were derived by first creating two variables: policy compliance (yes/no) and incentive alignment (yes/no). A company was coded as yes on policy compliance if it had either a human resource department or a union. We were not able to assess whether an actual human resource department existed because the organization chart was not included in the prospectus. However, the prospectus does include a very thorough discussion of the management team and its responsibilities. Therefore, we coded whether one of the top executives claimed responsibility for human resource activities. In a sense, we think this is a better measure because it indicates whether human resource activities are part of the responsibility of top management. In many cases, smaller firms have a clerk or administrator take responsibility for human resource activities; in these cases, the HR function would not be used as a form of organizational control. It is more likely that the function represents a form of control over all employees if it is the responsibility of someone in the top management team. A total of 23 (21%) companies said that someone in top management had responsibility for a human resource management function. Determination of union representation was much more straightforward because companies are required to disclose whether their employees are represented by a union in the employee section of the prospectus; 17 firms were coded as having a union (16%). As a result, 34 firms (31% of the sample) said that they had a human resource function or union. The company was coded as having incentive alignment if it had an incentive stock option plan for all employees¹ or profit sharing for all employees. A total of 16 companies

¹Incentive stock options (ISOs) are the most common method of providing stock to employees in initial public offering firms. ESOPs (employee stock option plans) are less frequently used.

or 15% were coded as having profit sharing for all employees, while 51 companies or 47% indicated they had incentive stock option plans were all employees. Sixty-two firms (57%) were coded as having either an incentive stock option plan or a profit sharing program for all employees. Overall, four different control orientations emerged. Thirty firms (28% of the sample) approached control informally; they had neither policy compliance nor incentive alignment. Alternatively, 19 firms (18%) relied on both forms of control. The remainder of the sample used either one form of control or the other; forty-three firms (40%) used only incentive alignment, while 15 firms (14%) used only policy compliance.

Firm Performance

Two measures of firm performance are used to test the hypotheses. Survival has received scant attention in the SHRM literature, perhaps due to its emphasis on older, more established firms, but it is particularly salient to the study of IPO firms which are much more vulnerable to survival threats. Eisenhardt (1989: 65) indicates that in newer ventures, the "likelihood of failure looms large," and indeed, this is the case for IPO firms. Of the 3,186 companies that went public in the 1980's, 58% of them were no longer listed on stock exchanges at the end of the decade (Zeune, 1993). For those firms that do survive, stock price is an important measure of performance just as it is for any other public entity; it represents the market value of the firm to shareholders. Therefore, in addition to survival, the effect of control orientation on stock price is also examined.

Survival. All firms still in business at year-end in 1993 were coded as survivors. Survival status is not easily determined, therefore, several steps were taken to assure correct identification of survivors. First, an on-line data base of current public firms was searched to find current

information on the companies. Supplemental information was gathered from Disclosure, a data clearing-house for the Securities and Exchange Commission (SEC). Disclosure was able to identify many of the active and inactive companies. The Directory of Obsolete Securities (1994) also was searched to identify bankruptcy, name changes, recapitalization, and mergers. In addition, phone calls were made to the numbers provided in the prospectus. Thirteen firms (12%) changed their names. These firms were called to find out whether the name changes were cosmetic, or whether the businesses had undergone other major transformations. Merged firms were considered non-survivors under the logic that the firm, as coded in 1988, had been joined with another set of management and organizational culture (Aldrich and Marsden, 1988; Kalleberg and Leicht, 1991). In addition, the stock prices of the merged firms were tracked, and 7 out of 8 mergers had stock prices that had decreased to almost zero prior to the merger, therefore, the trend in this particular sample seemed to be that mergers reflected something closer to "non-survivor" than "survivor." Eight mergers (7%) occurred among the IPO firms. Overall, 77 companies, or 71% of the sample, were coded as survivors, and 31 (29%) were coded as non-survivors.

Year-End Stock Price. Stock prices for each company for years ending 1989 through 1993 were obtained from COMPUSTAT, which is a data base that contains financial information for publicly held firms. Given that these companies went public at different times during 1988 (with some finalizing during 1989), 1989 was chosen as the first year for analysis in an effort to equalize all firms.

Control Variables

Several control variables, selected based on a review of both the strategic human resource management and initial public offering literatures (e.g. Beatty and Zajac, 1994; Huselid, 1995) were used in the analyses. The total number of employees, logged to correct for skewness, was included as a measure of size. This was considered more appropriate than using sales to measure size because many of the companies in this sample have zero sales, and given that the focus of the study is on employee control mechanisms, number of employees seemed the more appropriate measure of firm size. Net profit (also logged) at the time of the IPO was added as a performance measure. A dichotomous measure coded "1" for service industry and "0" for manufacturing was used to control for industry. The two category industry classification was selected after reviewing the distribution of firms in the Small Business Administration's recommended categorization. As noted in the earlier description of the sample, the majority of the firms fell into either the manufacturing or service categories; therefore, in order to conserve statistical power, only the two categories were used for the regression analyses.

An additional control variable (logged) indicated the level of risk faced by each firm. Each prospectus contains a section listing all risk factors faced by the firm, which must be disclosed to meet the requirements of the Securities and Exchange Commission. Prior research on initial public offering firms found that this measure was a useful way to code risk (Beatty and Zajac, 1994; Rasheed and Datta, 1994). The presence of the following risk factors were included in this measure: technological obsolescence, new product, few or limited products, limited number of years in operation, inexperienced management, technical risk, seasonality, customer dependence, supplier dependence, inexperienced underwriters, competition, legal proceedings against

company, liability, and government regulation. The summated risk measure ranged from 1 to 11, with a mean of 4.29 and a standard deviation of 1.88.

Company age (calculated as 1989 minus year formed) was also included as a control variable (also logged) because much of the literature on life cycle indicates that the presence of a human resource function is related to company age (e.g. Baird and Meshoulam, 1988). The regressions for stock price included an additional control variable, price per share at the time of the IPO. Rather than predicting percentage change in stock price, the regression was conducted to predict stock price for years ending 1989 through 1993 with initial stock price as a control variable. Percentage change in stock price is often an inflated number because many of the firms go public at a very low prices (mean is \$7.01), and it is not unusual to observe 100% or more percentage increases in short periods of time; therefore, use of absolute stock price with initial stock as a control seemed a more appropriate method for assessing stock performance. Table 1 includes the means and standard deviations for variables included in the analyses.

Insert Table 1 about here

Data Analyses

The three sets of hypotheses each state that control orientation will have effects on firm performance. First, correlations are presented to assess relationships between variables used in subsequent tests of the hypotheses. In order to test the hypotheses, we conducted logistic regression analyses and series of ordinary least squares (OLS) regressions using survival and stock prices, respectively, as the dependent variables. Logistic regressions are required for testing

the survival variable because it consists of only two values (Allison, 1984; Yamaguchi, 1991), whereas ordinary regressions will suffice for testing year-end stock prices.

RESULTS

Table 2 shows the correlations for variables included in the analyses. The use of policy compliance is positively and significantly related to company age, size and profitability and negatively related to company risk level. Firm risk level is negatively related to age, size and profitability. In combination, these tend to suggest that firms with higher risk firms are less likely to use policy compliance. Furthermore, the use of policy compliance is associated with higher stock prices in the short term (i.e. initial stock price, 1989, and 1990). The use of incentive alignment, on the other hand, is not significantly related to any of the other variables used in the analyses. Company size and profitability at the time of the IPO are significantly correlated with several measures of stock price, and survival is positively and significantly related to company age.

Insert Table 2 about here

Tests of Hypothesis 1

Hypotheses 1a and 1b state that excessive or negligible control through use of both policy compliance and incentive alignment or neither will negatively affect firm performance. Thus, we examined the effects of control orientation on firm survival and stock performance.

Survival Analysis. Table 3 presents the results of a logistic regression analysis with a set of control variables, two dichotomous variables representing the two choices of control strategy

(policy compliance and incentive alignment), and an interaction term for the effect between the two forms of control.

Insert Table 3 about here

The full model (including controls and variables of interest) is significant at the .01 level, and the classification table indicates that the model predicts survival at a 75.47% accuracy level. The model with only the HR (control orientation) variables is insignificant, and the model with only the control variables is significant at the .01 level with the coefficient for company age being the only significant indicator of survival. In the overall equation, the only significant variables ($p \leq .10$) are company age and size. These results do not support hypotheses 1a and 1b; it does not appear that having too much or too little control has any bearing on firm survival.

Stock Performance. Although extremes in use of control do not seem to affect firm survival, we conducted regression analyses to test their effect on short and long-term stock performance. Table 4 presents the results of regression analyses predicting firm stock prices for years ending 1989 through 1993. Each equation includes a set of control variables, the two dichotomous variables representing choice of control strategy (policy compliance and incentive alignment), and an interaction term (policy compliance * incentive alignment) that represents the control orientation chosen by the firm. Each equation is significant at the .01 level, with R^2 ranging from .49 to .26. Company profitability and stock price at the time of the IPO are significant predictors of year end stock prices in the short-term, and company size significantly predicts stock prices in later years. The interaction terms between the two forms of control are

significant in years 1989 through 1992, suggesting that the choice of control orientation affects stock price performance.

In order to determine whether it either negligible or excessive control affects stock prices, we calculated mean stock prices for years 1989 and 1992 for the following four conditions: (1) no policy compliance and no incentive alignment, (2) policy compliance only, (3) incentive alignment only, and (4) both policy compliance and incentive alignment. The results indicate that in 1989, firms with compliance only have the highest stock price (18.40) followed by those with both compliance and alignment (8.59) with incentive only following (7.19) and neither form of control having the lowest stock price (5.72). However, the pattern changes for years 1990 to 1993. For these later years compliance only and incentive only have the higher stock prices. Plots for years 1989 and 1993 graphically depict the difference between early stock performance (1989) and longer-term stock performance (1993).

Insert Figures 1 and 2 about here

Tests of Hypotheses 2 and 3

Hypotheses 2 and 3 are competing hypotheses that examine the effects of choice of control on firm performance in the presence of risk. Hypotheses 2a and 2b are complementary and state that as firm risk increases, incentive alignment will positively affect firm performance whereas reliance on policy compliance will harm firm performance. Hypotheses 3a and 3b state that, for higher risk firms, policy compliance will have positive effects on organizational outcomes while incentive alignment will have ill effects on performance. Given the complementary yet

competing nature of hypotheses 2 and 3, they can be tested simultaneously. Again, a logistic regression analysis and a series of OLS regressions are performed for survival and stock performance, respectively. These analyses differ from those used to test hypothesis 1 in that the interaction term between policy compliance and incentive alignment is dropped and two additional interactions are investigated; specifically, we examine the effects of the interactions between: (1) policy compliance and firm risk, and (2) incentive alignment and firm risk.

Survival Analysis. Table 5 presents the results of a logistic regression analysis with a set of control variables, two dichotomous variables representing two choices of control (policy compliance and incentive alignment), and interaction effects between control strategy and risk.

Insert Table 5 about here

The full model (including controls and variables of interest) is significant at the .001 level, and the classification table indicates that the model predicts survival at a 77.36% accuracy level. The model with only the HR (control orientation) variables is not significant, and the model with only the control variables is significant at the .01 level with the coefficient for company age being the only significant indicator of survival. In the overall equation, variables for company age, firm risk, incentive alignment, and the interaction between incentive alignment and risk are each significant at the .01 level. These results indicate that risk levels moderate the relationship between choice of control strategy and firm survival.

In order to understand the nature of the significant interaction, survival probabilities were plotted based on use of incentive alignment (yes/no) and level of firm risk. The risk measure was

split into three groups: low risk, medium risk, and high risk (based on the distribution of the risk factor), and the mean calculated probabilities of survival via the logistic regression equation were obtained for the following groups: (1) low risk with incentive alignment, (2) low risk without incentive alignment, (3) medium risk with incentive alignment, (4) medium risk without incentive alignment, (5) high risk with incentive alignment, and (6) high risk without incentive alignment.

Figure 3 shows the results of this plot.

Insert Figure 3 about here

Figure 3 indicates that companies with low risk at the time of the IPO are more likely to survive with an incentive alignment strategy, but when facing medium or high risk, the incentive alignment strategy begins to have a negative effect on a firm's probability of survival. This supports hypothesis 3b which states that incentive alignment will negatively affect firm performance as firm risk increases.

Stock Performance. Table 6 includes the results of five different regression analyses, with stock prices at years ending 1989 through 1993 as the dependent variables, and a set of controls including initial stock price. Two dichotomous variables, representing choice of control strategy (policy compliance and incentive alignment), are included as are two interaction terms (risk and control strategy). All equations are significant at the .01 level, with total R^2 ranging from .47 in 1990 to .25 in 1991. Profitability and initial stock price are significant in predicting year-end stock price only for earlier years (1989, 1990, and 1991), and the company size variable is significant in later years (1992 and 1993).

Insert Table 6 about here

The interaction between incentive alignment and risk is positive and significant for all years except for 1991 suggesting that using incentive alignment in higher risk firms has positive effects on both short and long term stock price. In order to better understand the nature of the interaction effects, stock prices for years ending 1989 and 1993 were plotted similarly to the analysis done for survival. Four categories were developed: (1) low risk with incentive alignment, (2) low risk without incentive alignment, (3) high risk with incentive alignment, and (4) high risk without incentive alignment. Mean stock prices in the four categories are shown in Figures 4 and 5.

Insert Figures 4 and 5 about here

Figure 4 shows the results for the interaction between incentive alignment and risk for 1989 year-end stock price. The plot shows that firms facing lower risk at the time of their IPOs obtain higher stock prices if they do not use incentive alignment, but for firms facing higher risk, incentive alignment has positive effects on short-term stock performance. The pattern of results is similar in 1993 (see Figure 3). It is also interesting to note that the gains achieved across the four categories seem to be highest for those firms using incentive alignment. For instance, even in the low risk condition, firms that use incentive alignment experience 69% growth in average stock price from 1989 to 1993 whereas firms without incentive alignment experience a 12% drop in

average price over the same period. In support of hypothesis 2a, incentive alignment has a significant and positive effect on stock price for high risk firms.

Again, policy compliance appears to have no effect on organization performance. Therefore, additional regressions were run that added the (policy* alignment) interaction and a three-way interaction (policy*incentive*risk) in order to determine if the effect of policy compliance is linked to its interaction with alignment. The results of those equations show that only alignment and the interaction of alignment and risk have an effect on firm performance.

DISCUSSION

The results of the study find that hypothesis 1a, which states that the presence of both forms of control will negatively affect firm performance, is supported for longer-term stock performance. However, in the short run, having both forms of control (compliance and alignment) has a positive effect on stock price. It is only for years 1990 through 1993 that firms with both types of control have lower stock prices. In all years, having no control is associated with lower stock prices, thus supporting hypothesis 1b. It appears that firms using either compliance or alignment do better than those organizations using either an informal approach toward organizational control or both types of control.

The finding that too much control (using both forms) has a negative effect on stock price supports the assumption that the relationship between risk and firm performance is curvilinear. This supports agency theory conclusions that higher agency costs negatively impact firm performance. While this interpretation explains the findings from the company's perspective, it would be useful to understand the results from the employee perspective. Although not the focus of this study, it does seem that using both the 'no control' and 'combined control' conditions

might result in employees' receiving mixed messages about behavioral expectations. In an informal control condition, managers and peers have the ability to communicate performance standards, and the messages received by employees might become very complex and contradictory. In the combined control conditions, employees receive a message that they should take risks and work toward the organization's goals (incentive alignment), while also acquiring information on specific behavioral requirements through the compliance system (HR function or union). Thus, rather than risk preferences being the key "employee" variable, it might be that goal clarity should be taken into consideration. There is certainly an abundance of work in organizational behavior (e.g. goal setting literature) and the strategy literature (contingency theory) that suggests clear articulation of organizational goals and that use of organizational practices to support those goals will improve firm performance.

The results of the tests of the competing hypotheses (2a, 2b, 3a, 3b) reflect a complex relationship between firm risk and performance. The findings from the analyses of stock price are consistent for both short and long-term stock performance, with hypothesis 2a being supported because higher risk firms with incentive alignment outperform those without incentive plans. However, the findings from the survival analysis do not support hypothesis 2a.

Although the results from hypothesis 1 show that control orientation does not have a direct or interaction effect on firm survival, when risk is considered as part of the equation, incentive alignment does have an effect on firm survival. The results of that analysis are contradictory to the findings for stock price. The survival analysis shows that incentive alignment has a negative effect on firm survival for high risk firms; high risk firms without incentive alignment have higher chances of survival (91% compared to 62%).

It seems that incentive alignment has a polarizing effect in that it has a negative effect on firm survival in high risk firms, however, for those organizations that are able to survive, higher risk firms with incentives obtain higher stock prices. Perhaps the amount of risk that is passed to employees in the highest risk firms (which include those that did not survive) is simply “too much” risk. This might result in the negative behaviors that agency theory suggests will ensue as a result of the risk averse nature of employees. The findings might also be reflective of the fact that employees know the chances of receiving a payout from the highest risk firms is fairly low, thus high risks are not associated with any potential reward, decreasing further any incentive to accept those risks.

At the same time, control through policy compliance has no significant effect on organization performance when firm risk was taken into consideration, although it does have a effect as evidenced in the analyses for hypothesis 1. The reasons for this lack of effect might be related to the role that the human resource function plays in higher risk, growth firms. It is possible that the human resource function in these firms is ineffective in terms of control, serving primarily as an administrative, clerical activity. Perhaps if the HRM groups were higher level, we would find a more direct effect. However, given the lack of detail in the prospectus, we can only speculate on the degree to which the HRM function actually contributes to organizational control.

It is interesting that our results actually support both hypothesis 2a and 3b, which were set up as competing hypotheses. If stock price is taken into consideration, then incentive alignment has a positive impact on firm performance in high risk firms. However, if we consider firm survival, then hypothesis 3b is supported because high risk firms with incentive plans have lower chances of survival. Thus, rather than clarifying the issue, it seems that our results simply add to

the confusion. This suggests that further research on this topic is needed, and studies should consider both short and long-term performance outcomes, multiple measures of firm performance, and research should be expanded to other samples of smaller, higher risk firms.

In terms of its contribution to the SHRM literature, the findings show that alternatives to human resource management as a form of organizational control should be studied. Additional control forms, such as team-based management and high involvement work systems, might also be considered in lieu of having a formal human resource function. These types of studies could be conducted not only for small firms but within large organizations if plants or divisions are the unit of analysis. In addition, the degree to which the HR function actually acts to control all employees should be pursued as a variable of interest in understanding firm performance.

The study does have several limitations that should be noted when interpreting the data. First, the sample consists of firms that have a higher probability of survival than might be expected in other years because this group of companies followed the 1987 stock crash. Second, the results from the analysis of stock price suffer from the problem of dwindling sample size in future years, due to the “non-survival” of firms in the sample. In addition, much of the data were obtained from the prospectus, which although scrutinized by many individuals, including the Securities and Exchange Commission, might still be prone to errors.

In addition, operationalization of control through compliance is somewhat suspect due to the fact that type of human resource activity could not be specified. It is possible that some of the companies coded as having a function have a very effective HR department, while others have a fairly insignificant administrative function.

The study and results do, however, suggest that research exploring the role of risk and overall control should continue. To date, significant research has been done to understand agency theory implications for executives and top management, but very few studies have applied the theory to study other groups of employees. In addition, the conceptualization of macro human resource management that views SHRM from an overall organizational control perspective also seems worthwhile. Further work specifying additional conditions under which incentive alignment and policy compliance strategies are beneficial or harmful to new and developing firms would be beneficial not only for the study of agency theory and SHRM but for providing practical suggestions for smaller, growing organizations.

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TABLE 1
MEANS AND STANDARD DEVIATIONS

<u>Variable Name</u>	<u>Mean</u>	<u>Standard Deviation</u>
Company age	11.74	17.25
Log number of employees	4.66	2.71
Log of net profit	16.10	.54
Industry (0=manufacturing, 1=service)	.54	.50
Survival (0/1)	.71	.45
Policy Compliance (0/1)	.32	.47
Incentive Alignment (0/1)	.58	.50
Initial stock price	7.01	5.18
Stock price, year end 1989	9.80	16.39
Stock price, year end 1990	6.78	8.07
Stock price, year end 1991	10.63	12.45
Stock price, year end 1992	11.47	12.13
Stock price, year end 1993	12.86	11.73

TABLE 2
CORRELATIONS FOR VARIABLES USED IN THE ANALYSES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Company age	1.00													
2. Log # of employees	.37	1.00												
3. Log of Net profit	.48	.48	1.00											
4. Log of Risk level	-.40	-.49	-.45	1.00										
5. Industry (0=mfg)	-.27	.05	-.11	-.09	1.00									
6. Survival (0/1)	.24	.02	.14	.02	-.13	1.00								
7. Incentive Alignment (0/1)	-.14	-.02	-.11	.06	-.18	.04	1.00							
8. Policy Compliance (0/1)	.36	.42	.46	-.37	-.14	-.01	-.03	1.00						
9. Initial Stock Price	.45	.59	.60	-.44	-.07	.08	-.03	.44	1.00					
0. Year end 1989 Stock Price	.22	.29	.53	-.25	-.01	.14	-.16	.28	.42	1.00				
1. Year end 1990 Stock Price	.28	.38	.53	-.25	.00	.20	-.06	.21	.62	.73	1.00			
2. Year end 1991 Stock Price	.14	.28	.29	-.14	.08	.25	.07	.05	.40	.31	.71	1.00		
3. Year end 1992 Stock Price	.12	.35	.21	-.05	.02	.22	.07	-.07	.30	.09	.54	.78	1.00	
4. Year end 1993 Stock Price	.16	.36	.14	-.04	-.08	.14	.04	-.04	.30	.04	.45	.58	.84	1.00

all correlations above .20 are significant at the .05 level; above .25 are significant at the .01 level, and above .33 are significant at .001 level.

TABLE 3

LOGISTIC REGRESSION ANALYSIS FOR SURVIVAL
COMPLIANCE AND ALIGNMENT

<u>Variables</u>	<u>Controls Only</u>		<u>Compliance, Incentive & Interaction</u>		<u>Full Model</u>	
	<u>b</u>	<u>s.e.</u>	<u>b</u>	<u>s.e.</u>	<u>b</u>	<u>s.e.</u>
Intercept	-9.99	10.59	.89	.36	-12.43	11.16
Industry	-.05	.50			-.18	.55
Company age	.19***	.07			.22***	.07
Log net profit	.60	.67			.72	.70
Log employees	-.12	.13			2.25*	1.30
Log of risk	2.09*	1.25				
Compliance			-.07	.60	-1.42	.96
Alignment			.58	.62	.35	.59
Compliance * Alignment			-.43	1.76	-1.48	3.97
Chi ²	18.91***		1.47		22.85***	

*** $p \leq .01$

** $p \leq .05$

* $p \leq .10$

Unstandardized logistic regression coefficients reported.

TABLE 4
RESULTS OF REGRESSION ANALYSIS FOR YEAR END STOCK PRICE

Variables	1989, n=107		1990, n=100		1991, n=98		1992, n=86		1993, n=71	
	Beta	T	Beta	T	Beta	T	Beta	T	Beta	T
Industry	.01	.12	.05	.57	.13	1.17	.02	.15	-.09	-.76
Company Age	-.12	-1.08	-.04	-.44	-.01	-.11	.01	.06	.04	.30
Log Profitability	.39	3.30***	.28	2.65***	.13	.92	.09	.62	-.07	-.47
Log Employees	-.05	-.41	-.02	-.16	.07	.51	.35	2.51**	.39	2.65***
Log Risk	.01	.12	.08	.86	.09	.75	.18	1.35	.17	1.23
Initial Stock Price	.23	1.95*	.55	5.02***	.40	2.86***	.24	1.60	.26	1.64
Compliance	.31	2.10**	.14	1.05	.07	.38	-.09	-.50	-.05	-.25
Alignment	.03	.27	.13	1.32	.24	1.96**	.20	1.56	.14	1.02
Interaction (Compliance *Alignment)	-.36	-2.48**	-.36	-2.73***	-.31	-1.86*	-.30	-1.66	-.29	-1.54
R ²	.36		.49		.26		.28		.26	
F	5.66***		9.37***		2.97***		2.86***		2.44***	

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$

Note: Standardized regression coefficients are reported.

TABLE 5

LOGISTIC REGRESSION ANALYSIS FOR SURVIVAL
COMPLIANCE, ALIGNMENT, AND RISK

<u>Variables</u>	<u>Controls Only</u>		<u>Compliance, Alignment & Risk</u>		<u>Full Model</u>	
	<u>b</u>	<u>s.e.</u>	<u>b</u>	<u>s.e.</u>	<u>b</u>	<u>s.e.</u>
Intercept	-9.99	10.59	.87	.36	-13.57	11.09
Industry	-.05	.49			-.01	.58
Company age	.19***	.07			.27***	.09
Log net profit	.59	.67			.65	.69
Log employees	-.12	.13			-.11	.13
Log of risk					7.70***	2.63
Compliance			-.07	.60	-.50	1.07
Alignment			.58	.62	3.26***	1.10
Interaction 1 Compliance*Risk			-.43	1.76	-.57	2.63
Interaction 2 Alignment*Risk			-1.30	1.40	-7.90***	2.73
Chi ²	18.91***		1.47		31.82***	

*** p ≤ .01

** p ≤ .05

* p ≤ .10

Unstandardized logistic regression coefficients reported.

TABLE 6
RESULTS OF REGRESSION ANALYSIS FOR YEAR END STOCK PRICE

Variables	1989, n=107		1990, n=100		1991, n=98		1992, n=86		1993, n=71	
	Beta	T	Beta	T	Beta	T	Beta	T	Beta	T
Industry	.05	.42	.08	.87	.15	1.39	.05	.40	-.06	-.53
Company Age	-.11	-1.02	-.03	-.32	-.00	-.03	.02	.13	.05	.39
Log Profitability	.39	3.31***	.30	2.72***	.14	.99	.10	.66	-.06	-.42
Log Employees	-.03	-.30	-.00	-.02	.08	.57	.36	2.54**	.39	2.68***
Log Risk	-.09	-.54	-.03	-.18	-.05	-.28	-.05	-.22	.12	-.57
Initial Stock Price	.20	1.71*	.52	4.67***	.37	2.66***	.21	1.45	.23	1.52
Compliance	.19	1.28	-.03	-.25	-.10	-.56	-.26	-1.48	-.25	-1.32
Alignment	-.29	-2.07**	-.17	-1.35	-.07	-.42	-.16	-.96	-.27	-1.54
Interaction 1 (Compliance*Risk)	-.19	-1.47	-.13	-1.08	-.10	-.69	.08	-.50	-.04	-.25
Interaction 2 (Alignment*Risk)	.31	1.76*	.28	1.69*	.31	1.53	.41	1.93*	.49	2.20**
R ²	.35		.47		.25		.29		.29	
F	4.94***		7.75***		2.57***		2.71***		2.51***	

*** $p \leq .01$; ** $p \leq .05$; * $p \leq .10$

Note: Standardized regression coefficients are reported.